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# AMERICAN NURSERYMAN

*The Nurseryman's Forte: To Make America More Beautiful and Fruitful*

DECEMBER 15, 1946



**Jasminum Nudiflorum**

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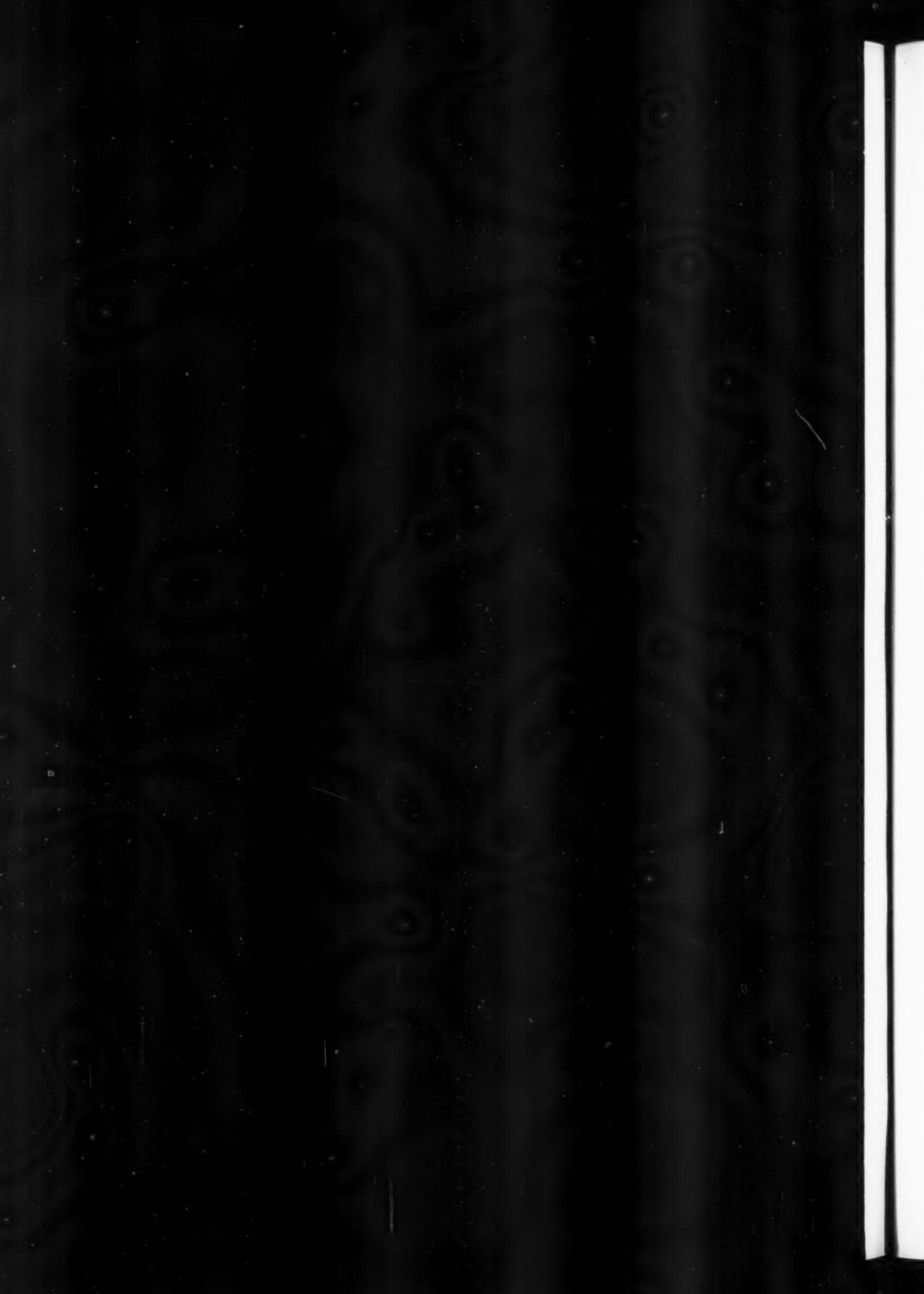


The reconversion from war to peace has not been as rapid, or as pleasant, as all had hoped. However, progress is being made and our industry will soon be back to normal—normal stocks, normal service, and normal prices! Meanwhile, we will continue our efforts to serve you well.

I, and my co-workers here at Mount Arbor, extend our thanks and our sincere wishes for a Merry Christmas and the best of health, prosperity and good cheer all the New Year.

*E. S. Welch, President  
Mount Arbor Nurseries*





# AMERICAN NURSERYMAN

{ Registered U. S. Patent Office }

*The Nurseryman's Forte: To Make America More Beautiful and Fruitful*

— VOL. LXXXIV, No. 12 —

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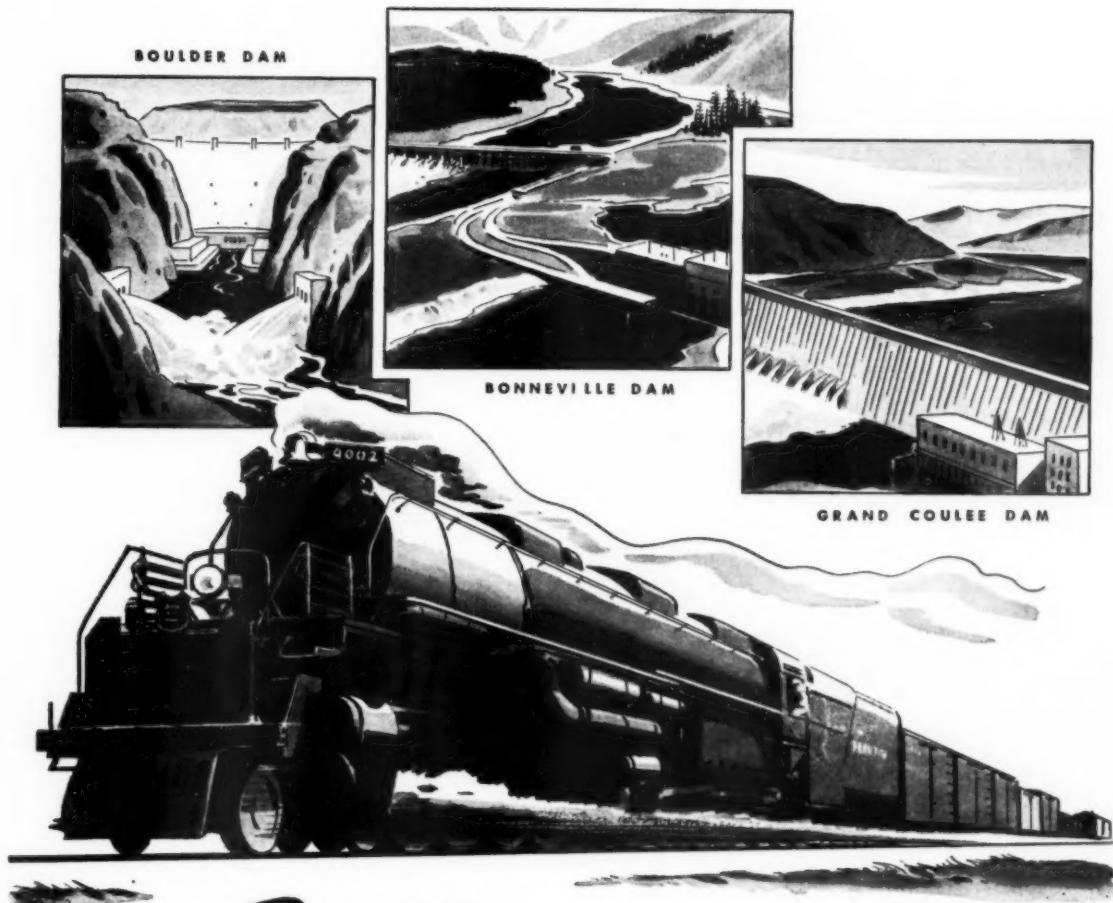
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**CLOSING DATE**—Present printing conditions require that more time be given for putting current issues of the American Nurseryman through the press. So if you send material for either the advertising or the news columns of the January 1 issue, please mail in time to reach this office by December 17.

## A MESSAGE TO THE FLORICULTURE INDUSTRY



*More POWER  
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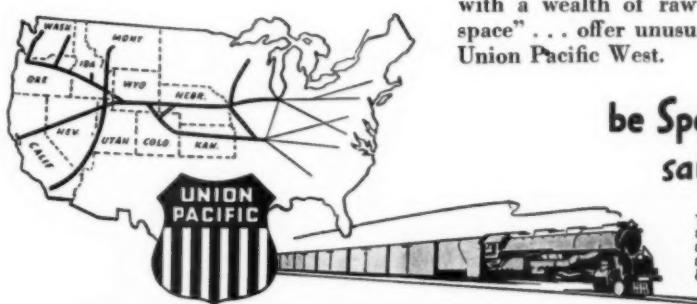
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# AMERICAN NURSERYMAN

F. R. KILNER, Editor

## Editorial

### TREND OF THE INDUSTRY.

Interesting figures have just come from the office of the American Association of Nurserymen, compiled from reports as to the business volume of members indicated by their payment of dues, which may indicate a trend of the industry in the past decade.

Members of the national organization pay dues on a basis that approximately indicates the volume of business. The exception is in the case of the members who pay minimum dues of \$10 per year, on an annual volume of business of \$10,000 or less. While the number of such members has increased annually with the exception of the past year, just as the number of total members in the association has increased, the percentage of members paying minimum dues has been close to the average of forty-two per cent for the past nine years. The percentage remained about at the average figure of forty-two per cent for the four years to 1942, dropping the next year to forty per cent, then rising in the following year to almost forty-nine per cent and thereafter dropping nearly to forty-three per cent for two years. The only great change was a further decline to 36.8 per cent in the fiscal year 1946-47, probably reflecting the increased annual business and the number of members who rose above the minimum class.

During the past decade A. A. N. dues payments have represented a steady increase in the dollar volume of business done by the members. Using 1937 as a base period year, change was not great until the year 1941, which showed a gain of seventeen per cent. The following four years have respectively shown a percentage increase over the 1937 base of twenty-four, forty-one, sixty-six and ninety-five per cent. Hence the dollar volume of A. A. N. members' business in the year 1945, as indicated by dues payments this year, was almost double that of nine years before.

Earlier this year A. A. N. headquarters compiled data showing percentage increases in the wholesale and retail prices of nursery stock from the spring of 1940 to the spring of 1946, gathering the information from a number of representative nursery catalogs. The data then

## The Mirror of the Trade

compiled indicated a steady increase in prices, both wholesale and retail, over that period of seven years. Wholesale prices in the spring catalogs of 1946 showed standard fruits at 310 per cent of 1940 prices, small fruits 324 per cent and ornamentals 200 per cent.

The same compilation showed increase in retail prices a little less in extent, 297 per cent of 1940 prices for standard fruits, 255 for small fruits and 178 for ornamentals.

The conclusion drawn from the figures on the gain in volume of business done by A. A. N. members in recent years, together with the figures on the increases in wholesale and retail prices, is that prices have gone up in percentage more than the volume of business. Hence, while nurserymen have been doing a larger dollar volume of business, the physical volume has been less, except possibly in the case of firms handling only ornamentals. The quantities of nursery stock actually sold to the public of late have been actually somewhat less than in preceding years.

### PLANT REGISTRATION.

In this country certain specialist flower societies have for some years conducted a voluntary registration service in an effort to avoid the duplication of varietal names. Where an organization's publications are widely known and the membership is large, as is the case of the American Rose Society, most effective work has been done in the stabilization of nomenclature of that particular flower. In similar fashion work has been carried on in behalf of the chrysanthemum, gladiolus, iris, peony and delphinium.

Recently an important step in this direction has been made by the proposal of the herbaceous and alpine plant section of the Horticultural Trades Association, an organization of British nurserymen and seedsmen, that a register of names of plants of garden origin be compiled, and the proposal has been accepted by the powerful Royal Horticultural Society.

The list of varieties of herbaceous and alpine plants is an exceedingly long one, and the work undertaken by the Royal Horticultural Society will involve an immense amount of

research and the training of a staff to compile and maintain the register which is to be the basis of the plan.

When a complete register of names of plants of garden origin has been compiled, raisers of new varieties could apply to the Royal Horticultural Society to ascertain if the proposed name is one not already borne by another plant of the same genus. This would avoid the important duplications which have appeared in delphinium and many other genera of herbaceous perennial plants. Upon payment of a small fee, designed to discourage frivolous registration, the proposed name will, if available, be registered and may not thereafter be used for any other variety in the same genus. Eventually an immensely valuable index will be compiled, affording references to description and history which is now usually to be obtained only with much effort.

When so large a proportion of the public in the United States has come to be interested in garden plants of one kind or another, it is hoped that before long some organization, or group of horticultural organizations, will be in position to carry on the registration of plant names on this side of the water. The job to be done is big enough, indeed, to warrant international cooperation, and it is indicated that the Royal Horticultural Society will seek the aid of specialist flower societies in this country, as well as that of the Dutch in reference to tulips.

Nurserymen know too well the confusion with respect to herbaceous perennials, and compilers of catalogs are sometimes at a loss to decide under which name they should offer a plant. The same name may be given to two varieties of one genus, one a plant of considerable garden value and the other one of no value at all. There is no easier way to dampen the enthusiasm of an amateur gardener than to let him order a plant he has seen praised in print and then receive something under the same name which is quite different. Nurserymen growing or dealing extensively in herbaceous perennials learn how to beware of the pitfalls in this regard, but amateurs are seldom so well informed. So a thoroughgoing system of plant registration, to avoid confusion in plant names, would advance horticulture in the minds of the public, besides rendering a tremendous service to the commercial interests.

Merry Christmas!

# First Awards in Regional Competition for Designs of Small Home Grounds

Judges in the regional prize competition for designs of small home grounds, sponsored by the American Nurseryman with the cooperation of the National Landscape Nurserymen's Association, have announced prize-winners in the solutions of each of the four problems in zone 2, an important home-building area in the northern portion of the United States.

No awards were made in zone 1, as only five plans were submitted in this zone, none of which merited publication, in the opinion of the judges. Zone 1 comprises an area of cold climate, limited plant resources and generally thinly settled states in the northernmost part of the country.

Plans receiving first-prize awards in each of the four problems in zone 2, together with explanatory comments on them by the prize-winners, are reproduced on the following pages. Awards in the other three zones will be presented in succeeding issues of the American Nurseryman.

Readers of this magazine will thereby have an opportunity to study outstanding designs for small home grounds, applicable to their respective localities. Not only are the plans worthy of attention for their merits, but also for the superiority of their treatment to numerous other plans, as indicated by the awards of the judges in the respective regions.

Since plans to be found in textbooks on landscape design are of an earlier era—and many of the books themselves are out of print—the designs that have been selected as the best in this competition will, by their publication in this magazine, provide up-to-date material for study. The extensive program of home building going forward in this country now, and probably to continue for several years, demands such study by landscape designers and planters. The influence they, with nurserymen, have an opportunity to exert on the appearance of the residential communities of the country through this era can scarcely be overemphasized.

Noting that planting designs for small homes of modern types were not widely available, the American Nurseryman announced the prize competition in its issue of May 1, 1946, with the purposes of stimulating and recording modern interpretations of landscape design and of

## PRIZE AWARDS IN ZONE 2.

### **Colonial Home**

**Doan R. Ogden, Romeo, Mich.**

### **Cape Cod Home**

**Jan B. Vanderploeg,  
Muskegon, Mich.**

### **Modern Style Home**

**Henry F. Leweling, Madison, Wis.**

### **Ranch Style Home**

**Henry F. Leweling, Madison, Wis.**

affording nurserymen with timely and valuable planting suggestions. It was further hoped that the builders of small homes would be given assistance in the planting of their grounds, resulting in better plantings, more attractive communities and better sales of nursery stock.

To insure the widest possible participation and application, contest rules were established which would include four types of contemporary small home buildings and planting conditions in all portions of the United States. Plans and elevations of four types of houses—modern, ranch, Cape Cod and colonial—were provided. Five regions, within each of which climatic conditions are essentially the same, were established, as shown by the map on this page.

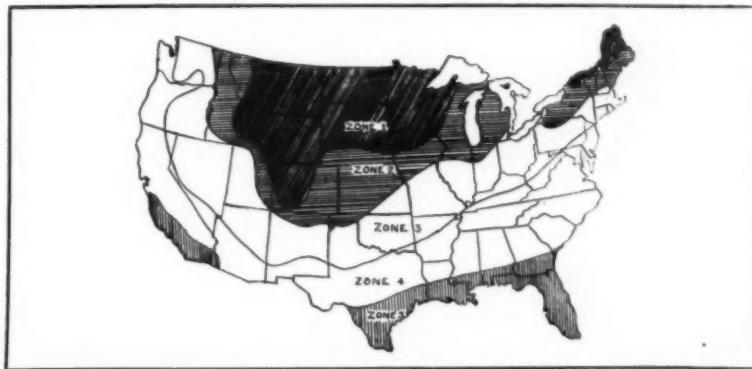
Within each of these five regions, awards were set up for the best planting for each type of home. It was assumed that the homes and grounds were for average, young to middle-

aged American families with homes in suburban residential communities. General requirements were listed for each type of home, indicating the number of members in the family and their particular desires. Up-to-date and attractive surroundings, making the best possible use of the limited space around the homes, were considered necessary to the successful planning of the home grounds areas.

The designer was allowed to orient the house on the lot in any way he chose, although specific measurements were given for the size of each house and lot. Planting keys giving the common and scientific names of each plant and the number to be used in each grouping, large enough so they may be clearly read in the reproductions, were required.

Not only were planting materials to be indicated that should be suited to the region selected as the location for the home grounds in each plan, but their cost and practical use were also to be considered. The all-over costs of the landscape layouts must be in keeping with the houses shown. The cost of maintenance, or the work to be done by the occupants, was to be given due regard, as well as the initial outlay for the landscaping program.

The high order of the prize-winning designs is due to their careful observance of the qualifications prescribed for them and for the guidance of the judges. These were (1) the general appropriateness, practicability and attractiveness of the home grounds; (2) the regional suitability of the plant material selected, taking into account the ultimate size of the plant material and the suitability of



Planting Zones Observed in Competition for Designs of Small Home Grounds.

the plants selected as to color, texture, fragrance, etc.; (3) originality in the solution of the problems, and (4) consideration for the effort needed in the upkeep of the property, as well as the initial outlay.

While emphasis was placed on the solutions of the problems, rather than on the composition or technique of the drawings, the latter was of high caliber in a large majority of the 101 designs submitted.

Cash award of \$50 for the best solution of each of the four problems in each of the five regions was offered, although if, as proved to be the case in zone 1, the judges deemed no plans worthy of awards, none were to be made. In addition, the judges in each zone were authorized to recommend honorary mention for such additional plans as merited publication, the designers of which were to receive awards of \$25. Several such designs have been chosen and will be published in issues of the American Nurseryman after the first-prize winners in each zone have been reproduced.

A grand prize of \$200 is to be given for the best all-around design,

to be selected from the prize-winning designs for each problem from every region in which a prize is awarded. Thus, out of the first-prize winners in zones 2, 3, 4 and 5, the grand-prize winner is to be chosen. This award will be made by a panel composed of the chairmen of judges in all the zones, at the meeting of the National Landscape Nurserymen's Association at the Sherman hotel, Chicago, Ill., January 13, preceding the convention of the Illinois State Nurserymen's Association. The plans receiving prize awards of \$50 will be exhibited at that meeting.

On following pages are designs that won the awards in zone 2. In each case the designer has supplied explanatory or interpretative comments regarding his plan.

**FACILITIES** for equipment storage, shipping and plant propagation have been transferred by Towson Nurseries, Inc., from Towson, Md., to Ashland, Md. Buildings for plant and equipment storage and a field office have been completed, and two new greenhouses are under construction.

## ROTARY OFFICIAL.

Charles G. Tennent, owner of the Tennent Nurseries, Asheville, N. C., is serving as a member of the aims and objects committee of Rotary International for the fiscal year 1946-47. His appointment to the committee makes him an international officer in the world-wide Rotary organization.

Mr. Tennent, born in North Carolina and a graduate of the University of North Carolina, is active in local and state affairs. He is a member of the North Carolina Association of Nurserymen and a member of the school board of Asheville.

A member and past president of the Rotary Club of Asheville, Mr. Tennent has previously served Rotary International as a district governor and as committee chairman. As a member of the aims and objects committee for 1946-47, he is concerned with the development of helpful counsel and advice to Rotary Clubs throughout the world on matters pertaining to their organization and administration. Mr. Tennent met with the other members of the committee at Rotary's headquarters at Chicago last month.

### CAPE COD HOUSE, ZONE 2.

The charm of the Cape Cod house lies in its dignity and simplicity. This is true of most of the structures erected by the colonists of Massachusetts, the builders of the original Cape Cod houses. The landscape work that was accomplished about their buildings usually had the same characteristics and that same charm.

The designer of the accompanying plan kept this in mind as he set about the task of designing the grounds of a Cape Cod house on a lot 60x150 feet.

His first interest was orientation. In zone 2 people are interested in getting sunshine into the living quarters of their houses. Accordingly the designer placed the living room where full advantage could be taken of the sunshine from early morning until evening. The garage was given the least desirable part of the property, the north side.

The house oriented, his next problem was setback. The garage opening was to be toward the alley, which meant that much of the back yard would be taken by driveway. Consequently, whatever area remained in the back yard would be quite narrow. Furthermore, two important rooms, the dining and living rooms, faced the street. Streets, to those within the house, usually mean noise, dirt, endless activity and confusion. The designer felt that most people when at home wish for peace and quiet; therefore, he placed the house more than fifty feet away from the road and then proceeded to screen out the road and the adjoining properties. This resulted in a spacious front lawn area, giving views of restfulness and quiet from the living room and dining room windows and opportunities for lawn games such as croquet and badminton.

The back lawn is small, but can be useful as a laundry yard, as a playground for the youngster, where he can

### BY JAN B. VANDERPLOEG, MUSKEGON, MICH.

be observed by the mother from the kitchen window, and as a place for entertaining.

The terrace was added on the east side of the house, as a place for sitting and possibly lunching. Both the kitchen and the living room have a doorway leading to the terrace, which makes it a splendid place for entertainment. During the afternoon and evening it is shaded by a horse chestnut tree and the house itself.

The planting immediately adjacent to the house is simple—a plant or two at the doorway and at the corners of the house. More planting would detract from the simplicity of the building. All plants used are colonial in spirit. Deciduous shrubs were selected, most of them being of the variety planted by the colonists and the remainder being of newer varieties but of near kin to those loved by the people of Cape Cod. The shrubs selected will give interest to the folks living within this house most of the year, as the plants will bloom at various times while some will have interesting fruits and others brilliant autumn coloration.

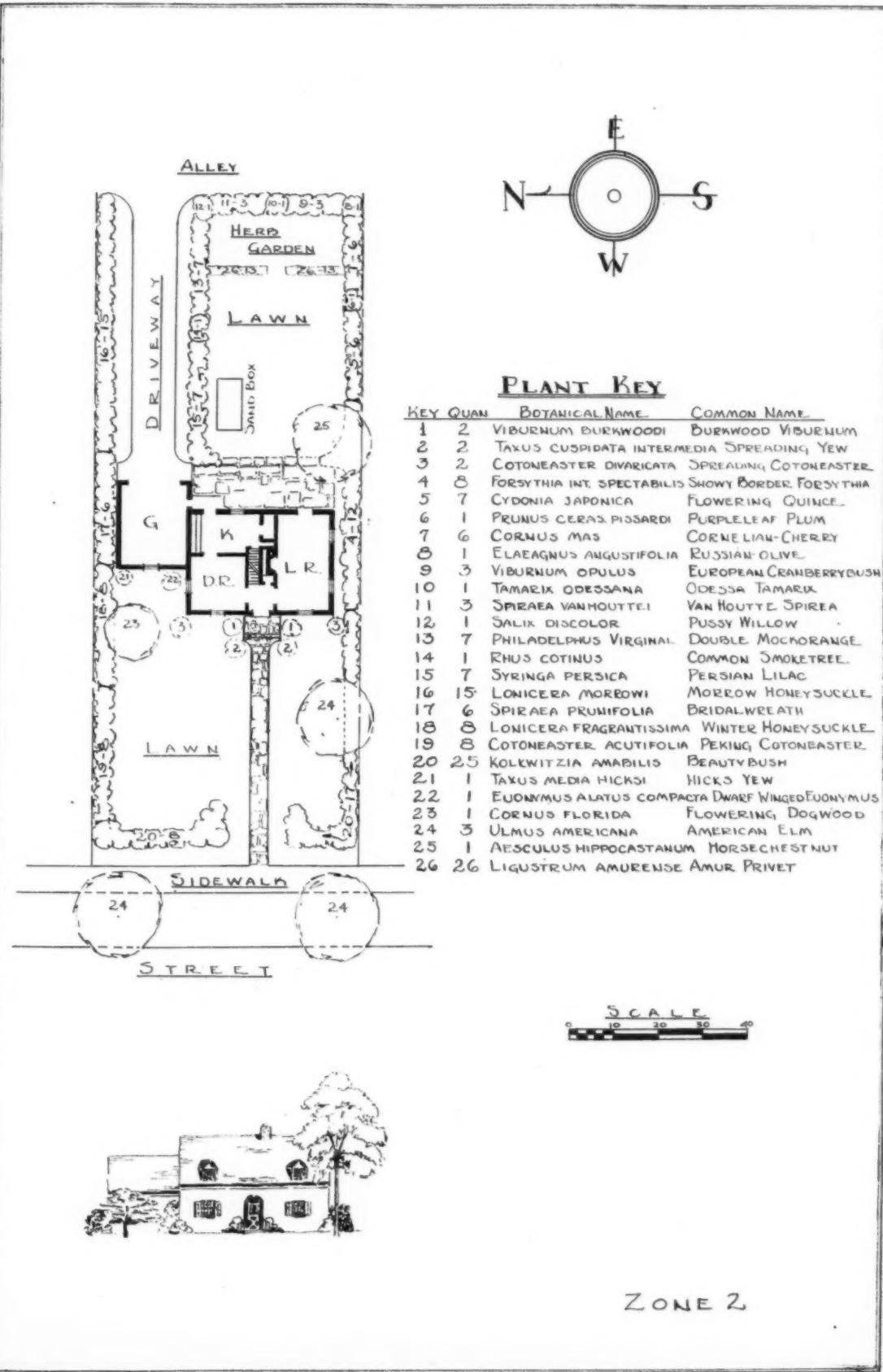
The walks and terrace are to be constructed of flagstone, another item colonial in spirit. The driveway might well be made of gravel or macadam.

The landscape work as proposed does not require a large amount of maintenance. The shrubs suggested for the screen planting can in most cases be allowed to grow to their maximum height and, therefore, little pruning will be necessary. Sprinkling and fertilizing the lawn and various plants will be the hardest task assigned to those selecting the Cape Cod solution. Well designed properties should give one pleasure and rest and not much work or even the thought of work.

Jan B. Vanderploeg.

DECEMBER 15, 1946

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## COLONIAL HOUSE, ZONE 2.

The middle-aged couple who take special pride in their surroundings will want beauty and interest on their property 50x150 feet. These will be achieved by views and vistas from the house, as well as through details to be more closely observed by "a turn through the garden." In creating these most important features, the landscape architect is guided by many time-tested principles.

The front, or public, area landscaping depends somewhat upon the treatment given neighboring properties; however, a free and open parklike lawn is usually in good taste and is unlikely to be too much of a departure from the general trend of the neighborhood. Sidewalk plantings of shrub groups usually only detract from the main picture. Foundation planting and necessary framing with trees are there only to build a natural setting for the house and, in the last analysis, must be governed by its architecture. Specimen evergreens, brilliant colors or exotic shapes should be used only rarely and with the greatest discretion.

The rear, or private, garden area needs more comment, because here the individual tastes of the owners need be the only concern. Variety of design and style can be unlimited, and this area should be tailor-made to suit the personalities and habits of its occupants. Garden interest and charm are developed subtly, but with the help, nevertheless, of definite rules.

Space design, on the accompanying plan as with every landscape problem, is the first consideration, requiring thorough study. Usually too much space is devoted to a service area with stationary laundry lines. Laundry lines, never beautiful, are here strung on hooks between the garage and the rear of the house, put up in a few minutes each washday, and considerable space and advantage are gained. Modern kitchen inventions being what they are, the service area can then be condensed to include only a compost heap, a small hotbed or cold-frame and temporary storage for rubbish.

The service area, thus dispensed with, permits consideration of the garden itself, with special attention given to circulation, life, color, architectural interest, change of levels, roof, fragrance and privacy.

Probably the most important feature of a good garden, particularly on a small lot, is the CIRCULATORY SYSTEM. Too many times our back-yard plantings are just a boundary border, framing an expanse of lawn which creates one very charming picture, but which leads neither the eye nor the feet to explore farther. Curiosity is aroused with a curved path and with screening of views which necessitate the use of the feet to get full appreciation of the garden. Free circulation begins either from the front lawn, the living room porch or the kitchen door and continues from one point to another.

Having used his feet, as well as his eyes, the explorer will find LIFE and movement in this garden. This is achieved by a small spray of water in a pool, by flickering shadows of tree foliage on the lawn and by birds and butterflies which have been attracted by plants placed strategically for that purpose.

He will also find COLOR. The private garden should rely heavily on color for interest. Annuals, bulbs, perennials, roses and flowering shrubs and trees are arranged in such a manner as to give a variety of interest for twelve months of the year. Special attention must be given, in this zone, to winter interest of bark color, berries and fruits. A judicious use of colored foliage enlivens the garden, as does autumn color, which is far too often neglected.

BY DOAN R. OGDEN, ROMEO, MICH.

ARCHITECTURAL INTEREST is another important feature of the garden and one which is often overlooked. To create this, the arbor is placed as the terminus to the porch vista and a birdbath or feeding station, or both, close to a refuge of bushes or trees. Garden seats are placed to take advantage of special points of beauty and interest. All are a necessary part of the garden structure provided they are used in scale and only where they serve a definite purpose.

Another major aid in creating interest is a CHANGE OF LEVEL, and this, while frequently neglected, can usually be accomplished even on the small lot. The expense often incurred in hauling soil to level the lot can far better be spent on drainage tile and garden steps, and the resulting change of levels will make an infinitely more satisfying garden.

A ROOF to the garden is created by the proper placing of shade trees, thus relieving the barrenness that would otherwise exist. These trees serve a multiple purpose, providing a shade and refuge and adding the third dimension of height to the already present length and breadth. Also they offer an ever-changing pattern of light and shade on the lawn, giving infinite variety to the entire garden scheme.

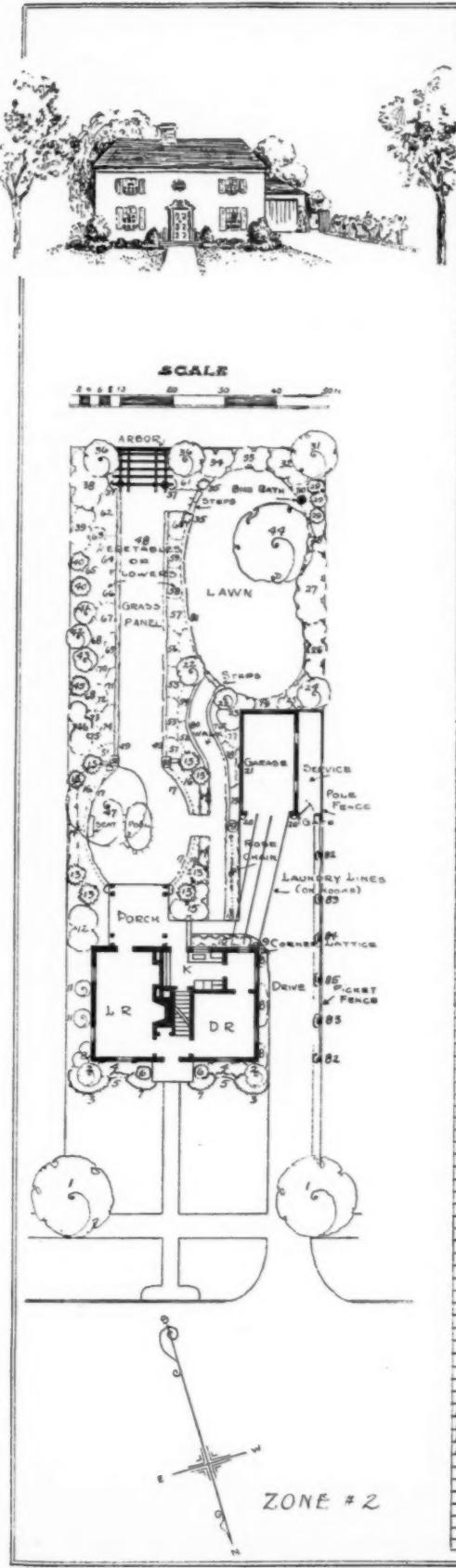
FRAGRANCE must be kept in mind when planning a garden, particularly near windows and the porch terrace. Nothing accomplishes the transition from house to grounds, the feeling of the outdoor living room, quite so effectively as the scent of lilacs, fragrant viburnums, golden currants or apple blossoms coming in through the open windows.

PRIVACY in the city garden is obviously all-important, because on it depends the sense of comfortable security which the city dweller, in particular, needs. To enjoy beauty near at hand, it is necessary to prevent the eye from straying to alleys, unkept vacant lots, garages and networks of wires and poles. The border mass planting, then, should be above eye level to alleviate possible harsh surroundings, to make a background for the specific plants of garden interest and to insure complete privacy. In general, a free-growing border with a harmonious silhouette is more pleasing to the eye than a trimmed hedge, and the maintenance is much easier. Size, form and texture of each grouping must be carefully considered so as to guarantee interest without discordance. A common mistake often made in small gardens is the planting of large masses of one variety when most homeowners desire, and should have, a wide variety of plant interest. Skillful blending of form and texture of small groups of shrubs and flowers, in the proper scale, pays large dividends in increased enjoyment to the occupant.

On any landscape problem, large or small, an eye for low maintenance costs is important. Open lawn areas make a happy combination of low maintenance and great beauty, serving as a perfect foreground from which to view special features and interests. In contrast, many small individual beds of flowers and shrubs not only give a restless feeling, but increase maintenance considerably.

The homeowner making use of such a plan will find he has a garden which combines beauty with utility, as well as one which gives a maximum of enjoyment for a minimum of labor. There is room on the open lawn area for croquet if he feels so inclined or for picnic lunches carried from the house on trays.

Doan R. Ogden.



KEY	QUA	BOTANICAL NAME	COMMON NAME	SIZE
1	2	ULMUS AMERICANA	AMERICAN ELM CAL.	4-12'
2	3	VIBURNUM BETEWOODI	FISHERMAN'S VIBURNUM BB	5-7'
3	4	EUONYMUS VEGETUS	BIG-LEAF WINTERCREEPER BB	2-4'
4	5	TAXUS CUSP BREVIFOLIA	SPREADING YEW BB	2-4'
5	6	YINCA MINOR	PERIWINKLE	Clump
6	7	TAXUS CAPITATA	UPRIGHT YEW (TRIM OVALE)	BB
7	8	FUNKIA LANCIFOLIA	DAY LILY	Clump
8	9	CHRYSANTHEMUM	KOREAN HYBRIDS (VAR)	2yr
9	10	CLEMATIS JACKMANNI	FLOWERING CLEMATIS	2yr
10	11	DEUTZIA LEMONIA	LEMONIE DEUTZIA	2-4'
11	12	RIBES AUREUM	SLENDER GOLDEN CURRENT	2-4'
12	13	SYRINGA PERSICA	PERSIAN LILAC	2-4'
13	14	JUNIPERUS CHINENSIS	CHINESE JUNIPER	3-4'
14	15	THUJA OCC. WAREANA	SIBERIAN ARBORVITAE (HEDG)	2-4'
15	16	DAPHNE SOMERSET	F&B	18-24"
16	17	NAECKEISSUS	DAFFODILS (VARIETY)	
17	18	HYACINTHS (20 KING OF THE BLUES) (20 LA VICTOIRE)	HYACINTHUS (VARIETY)	
18	19	FOLLOW BUBBS WITH WHITE	NICOTIANA OR MARIGOLD	
19	20	FOLLOW BUBBS WITH RED	FETUNIAS OR AGERATUM	
20	21	GLORYNTHS	SNOW DROP	
21	22	SOYUA SIBERICA	SIBERIAN SOYUAN	
22	23	KOSA FAMILIERS (PAULS SCARLET MME STALHEM, WILHELM)	SCARLET MME STALHEM, WILHELM	
23	24	KOSA HYBRID TEA	ASIAN TYPE	
24	25	THUJA OCC PYRAMIDALIS	PYRAMIDAL ARBORVITAE	2-4' FT
25	26	EUONYMUS RADICANS	WINTERCREEPER BB	1-2'
26	27	ESPALIER PEAR	CANDLEABRA TYPE BB	1-2'
27	28	PRUNUS KWANZAN	JAPANESE CHERRY	3-4'
28	29	PRUNUS MT FUJI	JAPANESE CHERRY	3-4'
29	30	PRUNUS SA SINENSIS	FINE FLOWERING ALMOND	2-4'
30	31	FROCH HAUE HAVEN	SNOW MILK HYDRANGEA	1-2'
31	32	HYDRANGEA ARB. GR	DOUBLE FIVE VIBURNUM	3-4'
32	33	VIBURNUM TOMPENTRUM	SPREADING GOMONIALE BB	3-4'
33	34	GOMONIA DIVARICATA	BUTTERFLY BUSH	2yr
34	35	BUDDEA DUBONNET	ORIENTAL ARBORVITAE	2-3'
35	36	PISTA ORIENTANIS	LEMON LILY	Clump
36	37	HEMIGRANATIS FLAVA	LILY OF THE VALLEY	2-4'
37	38	MALUS X YOUNGII	VALLEY WHITE CEAR	
38	39	MALUS SARGENTI	DOUBLE FLOWERING CHUM	
39	40	PRUNUS TRINOBIA	GOLDEN MOCKORANGE	2-3'
40	41	PHILADELPHUS COR. AUREUS	DAWAR ALBERTA SPRUCE	2-3'
41	42	PIGEA CONICA GHANICA	DAWAR	5-6'
42	43	APPLE WEALTHY	DAWAR DUCK	5-6'
43	44	APPLE GOLDEN DELICIOUS	DAWAR WHITE CEAR	5-6'
44	45	WISTERIA SINENSIS (CREATED)	CHINESE WISTERIA	3yr
45	46	WEIGELA VAN HOUTTEI	VANHOUTTE WEIGELA	3-4'
46	47	FORSYTHIA SPECTABILIS	SHOWY BORDER FORSYTHIA	3-4'
47	48	PRUNOTSUGA DOUGLASII	DOUGLAS FIR (GLENDEL R)	BB
48	49	PRUNUS YESUVITIS	FURRY LEAF ENUM	
49	50	CERCIS CANADENSIS	RED BUD	2-3'
50	51	SPREA TEICHOCARPA	WHITE SPIREA	2-3'
51	52	FORBES AUGUSTARIA	EUROPEAN MOUNTAIN ASH	10-12'
52	53	ABIES CONCOLOR	WHITE FIR	10-12'
53	54	SYRINGA vulgaris (ALFONSE LAVAILLE - CHAS JOLY - MACHAFFEY)	WEAVING BIRCH	BB
54	55	BETULA ALBA LACINATA	VEGETABLES - WATER PLANT AS LISTED BELOW	
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### LOW-COST HOME PLANS.

When victory gardens of vegetables were supplanted by low-cost homes for returned veterans and industrial workers in the attention of the National Garden Institute last spring, effort was made to find designs which would guide the home builders in planting their grounds.

Finally, through the good services of the National Landscape Nurserymen's Association, ten of its members each prepared a plan for a typical low-cost home. Most of these are for a lot either 50x100 or 60x150 feet.

With appropriate comments on the general subject of planting the home grounds, these ten plans are now presented in a booklet of twenty pages, 8½x11 inches, entitled "Garden Plans for Low-cost Homes." The booklet is intended for circulation by larger employers and others among veterans, industrial and office workers and all others who are thinking of building or buying a home or of improving their home grounds.

From Andrew S. Wing, executive secretary of the National Garden Institute, Inc., 598 Madison avenue, New York 22, N. Y., comes the in-

formation that the booklet is available at 10 cents per copy. In large quantities the cost may be slightly less.

### ALDERMAN HONORED.

An honorary recognition certificate was awarded to Dr. W. H. Alderman, chief of the department of horticulture, University of Minnesota, at the convention of the Wisconsin State Horticultural Society, held November 14 and 15, Oshkosh, Wis.

The certificate recognized the services of Dr. Alderman as superintendent of the Minnesota fruit breeding farm, Excelsior, in breeding new fruit varieties of value to the area and in advancing the science of horticulture through research and teaching. Foremost among the new fruit varieties developed by Professor Alderman at the fruit breeding station are the Latham raspberry, the Minnesota varieties of plum and the new apples Haralson, Fireside and Prairie Spy.

Born in 1885 and reared on a general grain and orchard farm in western New York, Dr. Alderman received his bachelor of science degree

in agriculture at Cornell University, Ithaca, N. Y., in 1908. After serving as student assistant at Cornell, field agent for the department of pomology and associate horticulturist at the experiment station at Geneva, he left New York to become professor of horticulture and chief of the department of horticulture at West Virginia University. He later became acting dean of the college of agriculture at that university and acting director of the West Virginia experiment station. Besides being superintendent of the fruit breeding farm, he is chief of the department of horticulture at the University of Minnesota.

THE stork brought a grandchild twice in the month of October to L. B. Dean, head of the Arp Nursery Co., Tyler, Tex. A daughter was born to Mr. and Mrs. L. A. Dean, October 8, and a son to Mr. and Mrs. Clark Kidd, October 28. L. A. Dean has been in the hospital since November 15, with lacerations and crushed bones in arm and ankle suffered when he was caught by a falling section of a steel water tower.

### MODERN STYLE HOUSE, ZONE 2.

The landscape plan for the modern style house is designed to repeat the pronounced horizontal lines of the building. This will create a harmonious setting for the house, which is on a flat lot, 75x150 feet.

The public front yard area is planted to invite people into the dwelling. Red maples are designated on the parking area of the street to enframe the building. The transition from the street trees is carried to the house by the horizontal lines of a cockspur hawthorn. The doublefile viburnum carries this transition into the foundation planting. The dwarf spreading Japanese yews in textural contrast to the wintercreeper euonymus and deciduous material will give year-around interest to this front area planting. Periwinkle is liberally used as a ground cover beneath the shrubs in the front. Into the edges of this area, spring-flowering bulbs can be used in drifts to give additional color and interest.

A grass mixture of Kentucky bluegrass and Astoria bent grass can be used on sunny lawn areas. In all the shady places a dominance of Chewings fescue and some Astoria bent grass mixture is satisfactory.

The service area directly east of the garage is enclosed by a 5-foot fence, on which climbing roses and large-flowering clematis are trained. This area can also be used for the drying yard because the foliage of the two climbers will not appreciably reduce the air circulation. The flagstone walk with sod between the stones will soften its harshness. Exits are located at either end to allow free circulation in the service area.

The back-yard area is divided into two distinct sections. The quiet zone at the rear of the service area, east of the bedroom wing, has a red maple and arrowwood viburnum border to give privacy and to reduce noise. Below the bedroom windows, climbing roses are

### BY HENRY F. LEWELING, MADISON, WIS.

permitted to ramble and to be trained on the walls of the building. The second section, which is the active back yard, has a bay extending eastward that can be easily used for greater privacy.

The main back-yard area gives the feeling of distance through the use of open lawn space. The view is terminated by the Douglas firs in the rear border. These evergreens are repeated along the side border and just to the rear of the bedroom wing, in order to give continuity to the evergreen plantings from the public front yard to the back yard. Through the use of silky dogwood, gray dogwood evergreens and paper birches, the entire back-yard area will have a 4-seasonal interest in texture and color.

The vegetable garden is placed in the southeast corner of the lot. To seclude it from the general view it is enclosed by a 5-foot fence, on which cultivated grapes may be trained.

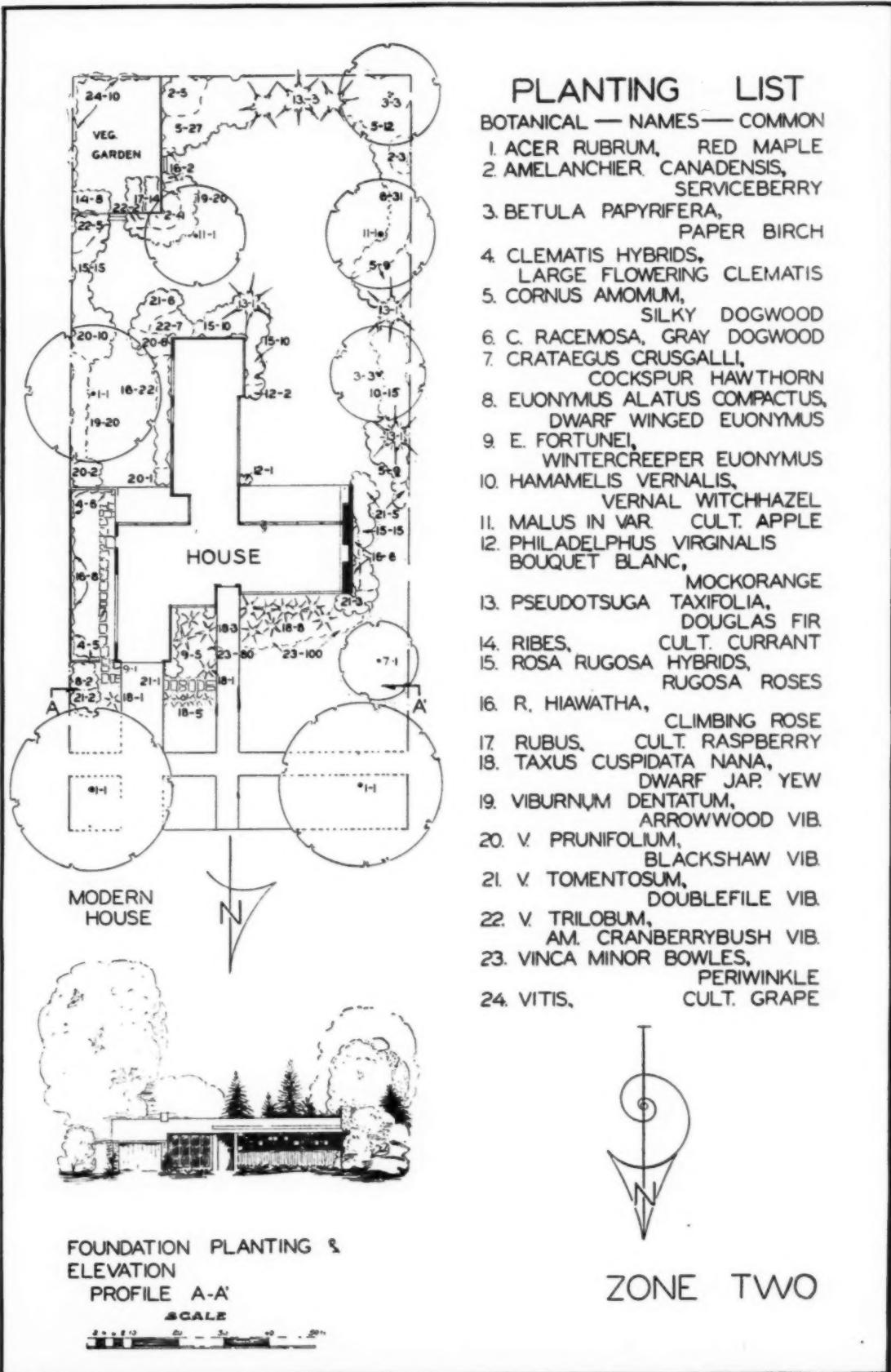
In general, the entire plan is based on naturalism insofar as it is possible to use native shrubs and trees. The best exotics are introduced near the building.

The cultivated apples, currants, raspberries and grapes are left to the choice of the home owner.

In the area designated as zone 2, there is a wide variation of growing conditions because of soil acidity or alkalinity, soil texture, humidity, rainfall and temperature variation.

In the northern sections of zone 2, doublefile viburnum (*Viburnum tomentosum*) may be replaced by blackhaw viburnum (*Viburnum prunifolium*), cranberrybush viburnum (*V. trilobum*) or pagoda dogwood (*Cornus alternifolia*). Vernal witch hazel (*H. vernalis*) may be replaced by common witch hazel (*H. virginiana*).

Henry F. Leweling.



### TRAINING HYBRID ROSES.

The training of hybrid perpetual and climbing roses to produce flowers along the entire lengths of the tall heavy canes normally developed by all vigorous roses of these types rather than only near the tops of the canes is discussed in the November news-letter of the Virginia Nurserymen's Association.

Reporting on an experiment with ninety-eight varieties of hybrid perpetual roses at the Virginia agricultural experiment station, Blacksburg, the news-letter describes how four parallel wires were stretched along the rows, as for grapes, when the bushes were pruned in early spring. The best canes were selected and

fastened to the wire by two different methods. The first was to carry the cane in a horizontal position, and the second was to tie the cane along one wire and then drop the end to the lower wire, where it was tied.

Instead of the blooms' being clustered near the end of the cane, a fairly even distribution was obtained, especially where the canes were horizontal. If the cane was too rigid to place horizontally it was carried over one wire to form an arc with the end of the cane. The flowers were produced chiefly at the upper portion of the bend.

A similar treatment of numerous climbing varieties gave like results. Ramblers with flexible canes can be

trained easily in this manner, while a rugosa hybrid like Doctor Eckener develops large, stout canes which cannot be bent without injury after they are mature. However, in the case of such roses, the canes may be trained as they grow.

The different varieties vary widely in their flowering habits and therefore will not respond equally well to this treatment. The climber Doubloons will tend to be bare near the ground, with its flowers chiefly four to six feet above, while Chevy Chase may have a heavy set of flowers from the ground to the top. Where roses are used as specimen plants, with suitable space or room they might be trained in more than one plane, to give the effect of a flowering shrub.

### RANCH STYLE HOUSE, ZONE 2.

The design for the ranch style house is to give it a rural atmosphere and yet retain the urban charm of compactness. The main planting theme is to continue the horizontal lines of the house into the landscape plan, for a gently rolling lot, 100x200 feet.

The foundation shrub planting of the public front yard expresses the horizontal lines of the house. This note will become more evident by the spreading branches of the red oaks, white oaks, hawthorns, winged euonymus, dwarf spreading Japanese yews and upright Japanese yews as they mature. A flagstone walk is extended across the front yard behind the spreading Japanese yews to facilitate easy access to the front door, garage and the service area.

The southeast side is planted to fruit trees. No named variety is mentioned because of the wide differences of soil texture, soil pH, rainfall, humidity and temperature variations in zone 2. On the property line is a 5-foot fence, upon which grapes are trained.

The lawn and game area to the rear of the house is actually the most used part of the lot. It is composed of four distinct sections. The part directly in back of the bedroom wing is the transition section from the orchard to the lawn and game area. This area is designed to screen some of the orchard. Although fruit trees are placed irregularly, they need screening in the fall when most shrubs show autumn coloring. An apple tree is carried into the more active area in order to avoid a distinct boundary. The private bay in the south corner is well closed off and could easily be converted into a wild flower area by bringing the native wild flowers into the edges of the shrub border. On the vegetable garden corner, slightly off center, a saucer magnolia has been used to bring boldness of bloom in the early spring. The coarseness of the saucer magnolia in bloom, in foliage and in twig texture will give a strong accent and focal point. This tree will tend to invite people to the rear of the yard with the idea that the private bay area will come as a pleasant surprise.

The back yard is sufficiently spacious for most lawn games. Youngsters will find it interesting for active games by taking advantage of the length of the area. The paved terrace with its attached pool at one corner is an intimate outdoor living room. It forms a transition between house and garden. The harshness of the pool's lines is softened by using low-growing shrubs. The margin of the pool

### BY HENRY F. LEWELING, MADISON, WIS.

should not show any cement. An occasional flagstone may protrude slightly over the edge. The sod should come directly to the water's edge and be permitted to creep over this rim. The pool should also be raised a foot above the terrace level by using the same flagstone material. This again could be softened by the same shrub plantings and yet allow people to sit on the edge to enjoy the reflections and the coolness of the pool.

The vegetable garden area is enclosed, and a tool house is suggested to avoid carrying equipment from the house to the garden. Coldframes are suggested for starting vegetables and annual and perennial flowers. The outer fence area can be utilized for cultivated grapes, whereas the fence toward the yard can be used to support climbing roses.

The service area is enclosed with a 6-foot fence, on which climbing roses can be trained. The foliage of the roses will not interfere severely with the air circulation in the drying yard. By using a fence around the service area and training climbing roses on it, a minimum of space is used for woody plant material and a maximum of space remains for the service area.

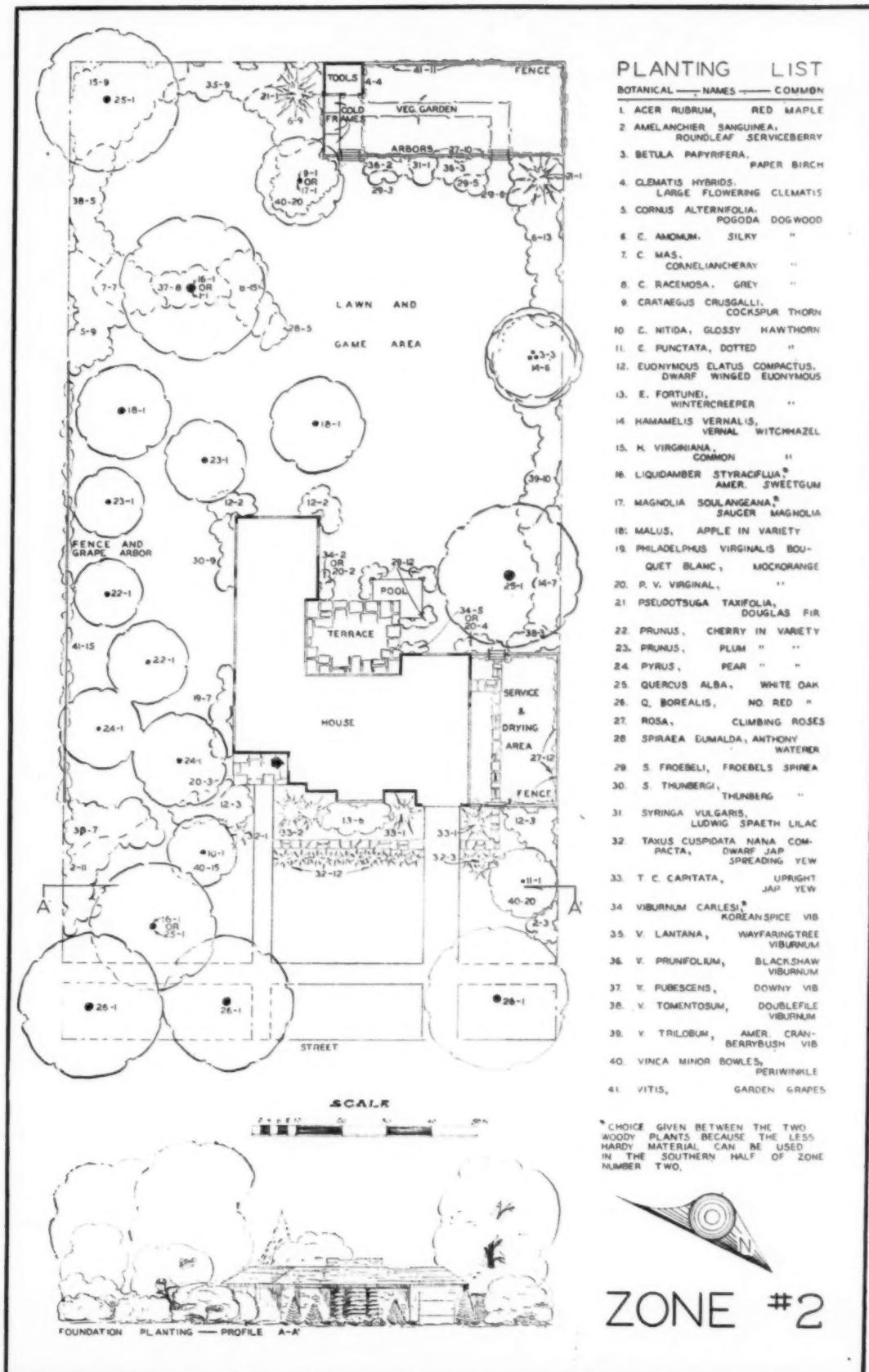
The entire plan will give a 4-seasonal interest. In spring and fall a particular display of color will be evident. In the winter months the green of the evergreens, the purplish color of the silky dogwood stems, the airy red color of the fruiting stems of the gray dogwood, the gray pussy-like buds of the saucer magnolia, the white bark and reddish branches of the birches and the red fruits of the hawthorns give interesting color notes during the snowy season.

Spring-flowering bulbs should be used in drifts beneath the edge of the shrubs. Periwinkle can be used to advantage beneath the shrubs as ground cover.

A choice of two woody plant materials has been noted for adaptation to varying climatic conditions. This design can be extended farther northward by substituting common witch hazel (*Hamamelis virginiana*) for vernal witch hazel (*H. vernalis*), and pagoda dogwood (*Cornus alternifolia*) or blackhawk viburnum (*Viburnum lentago*) for doublefile viburnum (*V. tomentosum*).

Emphasis should be placed on selecting only the shrubs that give best possible spring blossoms and fall colored foliage. The wayfaring tree viburnum (*Viburnum lantana*) should be carefully selected to assure good spring bloom, fruiting color and especially fall color.

Henry F. Leweling.



# Coming Events

## MEETING CALENDAR.

January 2 to 4, Indiana Association of Nurserymen, Antlers hotel, Indianapolis.

January 7 and 8, Western Association of Nurserymen, Hotel Muehlebach, Kansas City, Mo.

January 8 and 9, Maryland Nurserymen's Association, College Park.

January 10 and 11, Iowa Nurserymen's Association, Hotel Kirkwood, Des Moines.

January 13, National Landscape Nurserymen's Association, Sherman hotel, Chicago, Ill.

January 13 to 15, Ohio State University short course for arborists and landscape gardeners, Neil House, Columbus, O.

January 14, All-American Rose Selections, Inc., membership meeting, Sherman hotel, Chicago, Ill.

January 14, Massachusetts Nurserymen's Association, Hotel Kenmore, Boston.

January 14 to 16, Illinois Association of Nurserymen, Sherman hotel, Chicago.

January 16 and 17, Oklahoma State Nurserymen's Association, Huckins hotel, Oklahoma City.

January 17 and 18, New York State Nurserymen's Association, Hotel Sheraton, Rochester.

January 17 and 18, Western New York Nurserymen's Association, Hotel Sheraton, Rochester.

January 21, Oregon Association of Nurserymen, Heathman hotel, Portland.

January 22, Connecticut Nurserymen's Association, Waverly Inn, Cheshire.

January 22, New Jersey Association of Nurserymen, War Memorial building, Trenton.

January 22, Ohio State University short course for nurserymen, Neil House, Columbus, O.

January 23 and 24, Ohio Nurserymen's Association, Neil House, Columbus.

January 29 and 30, Virginia Nurserymen's Association, John Marshall hotel, Richmond.

January 29 to 31, Michigan Association of Nurserymen, Pantlind hotel, Grand Rapids.

February 4 to 6, New England Nurserymen's Association, Hotel Statler, Boston, Mass.

February 7, Eastern New York Nurserymen's Association, Hotel Pennsylvania, New York.

February 7, Long Island Nurserymen's Association, Hotel Pennsylvania, New York.

February 7, West Virginia Nurserymen's Association.

## VIRGINIA DATES SET.

January 29 and 30 have been chosen as dates for the winter meeting of the Virginia Nurserymen's Association, reports A. S. Gresham, Jr., secretary. The meeting will be held at the John Marshall hotel, Richmond.

## CHANGE INDIANA DATES.

Crowded conditions at Purdue University, La Fayette, Ind., have necessitated a change in plans for the winter meeting of the Indiana Asso-

ciation of Nurserymen. The meeting is to be held January 2 to 4 at the Antlers hotel, Indianapolis, instead of January 8 to 10 at Purdue University, as previously announced.

## WEST VIRGINIA DATE.

The date for the winter meeting of the West Virginia Nurserymen's Association has been set for February 7, according to F. Waldo Craig, Charleston, secretary of the association.

## MASSACHUSETTS DATE SET.

Plans for the winter meeting of the Massachusetts Nurserymen's Association were made at an executive committee meeting held November 19. According to President Marinus Van der Pol, the winter meeting is to be held January 14 at the Hotel Kenmore, Boston. The sessions, which are to be open to all newcomers in the trade, without any obligation to join, will begin at 10 a. m.

## TEXAS ROSE QUEEN.

The 1946 Texas rose queen, Sarah Margaret Saunders, is pictured on this page with Homer Eikner, Vermay Nursery Co., president of the East Texas Rose Growers' Association, and Clark Kidd, Arp Nursery Co., president of the Texas Rose Research Foundation.

Miss Saunders, a college sophomore from Tyler, was chosen queen at the Texas state fair and photographed at the rose exhibit there sponsored by the East Texas chamber



Texas Rose Growers' Officers and 1946 Rose Queen.

of commerce. Over 500 dozen cut flowers from Tyler's commercial fields were furnished for the exhibit every other day by the East Texas Rose Growers' Association.

## OREGON MEETING DATE.

An advisory board meeting the evening of January 20 will precede the midwinter meeting of the Oregon Association of Nurserymen, which is to be held January 21 at the Heathman hotel, Portland. A number of visitors from the state of Washington are expected to be present at the meeting, according to Julia Hausch, secretary of the Oregon association.

## WESTERN NEW YORK PLANS.

The winter meeting of the Western New York Nurserymen's Association will be held in connection with the New York State Nurserymen's Association convention, which is to be held January 17 and 18 at the Hotel Sheraton, Rochester, according to A. Synesael, Newark, secretary of the Western New York association.

At the opening session, Friday morning, January 17, Mayor Dicker of Rochester will give the welcoming address, to which response will be made by Howard Taylor, president of the New York State Nurserymen's Association. Richard H. Jones, Nashville, Tenn., president of the American Association of Nurserymen, will talk on national affairs affecting nurserymen.

In the afternoon will be held a business session of each organization, with election of officers.

In the evening a banquet is scheduled, with a prominent speaker and entertainment. The toastmaster will be A. N. Christy, of Newark, whose ability and wit in that capacity are well known.

Saturday morning, January 18, will be held the presidential breakfast, a complimentary affair. At the session following, there will be prominent speakers, and it will close with the installation of officers. The complete program will appear in the next issue.

## EASTERN NEW YORK.

Four eastern nurserymen's groups are scheduled to meet at the Hotel Pennsylvania, New York city, February 7 and 8. The annual winter meeting of the Long Island Nurserymen's Association will be held February 7. The Eastern New York

DECEMBER 15, 1946

17

*Available*  
**FRUIT STOCKS**

*for 1946-47  
SEASONS*

Our inventory indicates that we will have the following stock available for the wholesale trade for the 1946-47 season:

		18 to 24 ins.	2 to 3 ft.	3 to 4 ft.
15,000	Halehaven Peach .....	\$0.17½	\$0.25	\$0.35
5000	South Haven Peach .....	.17½	.25	.35
7500	Red Haven Peach .....	.17½	.25	.35
10,000	Rochester Peach .....	.17½	.25	.35
5000	Brackett Peach .....	.17½	.25	.35
10,000	Bell of Ga. Peach .....	.17½	.25	.35
5000	Early Hiley Peach .....	.17½	.25	.35
10,000	Regular Hiley Peach .....	.17½	.25	.35
5000	Red Bird Peach .....	.17½	.25	.35
3500	Early Rose Peach .....	.17½	.25	.35
5000	J. H. Hale Peach .....	.17½	.25	.35
5000	Shipper's Late Red Peach .....	.17½	.25	.35
3000	Mayflower Peach .....	.17½	.25	.35
7500	Regular Winesap Apple (whips) .....	.15	.20	.30
8000	Stayman Winesap Apple .....	.15	.20	.30
5000	Summer Queen Apple .....	.15	.20	.30
4000	Red Delicious Apple .....	.15	.20	.30
3500	Yellow Delicious Apple .....	.15	.20	.30
1500	Pineapple Pear .....	.50	.60	.75

We have a lot of fine stock this year and will welcome the opportunity of serving you.

**Heavy Peach is scarce. Better order early.**

**FARMERS WHOLESALE NURSERY**

PAUL PATTERSON, Owner

P. O. Box 65

Smithville, Tenn.

Nurserymen's Association, formerly the Allied Retail Nurserymen's Association, will meet the same day, and in the afternoon there will be a joint meeting of the two associations.

February 8 members in the eastern region of the National Landscape Nurserymen's Association will meet, and the eastern region of the American Association of Nurserymen will hold a short business meeting. A joint committee is being formed to work out details of the program.

At a recent meeting of the executive committee of the Long Island Nurserymen's Association a nominating committee, consisting of John Visser, chairman; Hewlett Lewis and F. Williams, was appointed to present its recommendations for the offices to be filled at the annual meeting. It was also decided that the Long Island association will meet the first week in March at the Garden City hotel, in conjunction with the meeting of the Long Island Garden Clubs.

#### HIGHWAY SHORT COURSE.

Because of crowded conditions at Ohio State University, Columbus, the sixth annual short course on roadside development, jointly sponsored by the university and the Ohio department of highways, will be held in the auditorium of the Ohio department of state building, in downtown Columbus. Conference dates have been set for February 13 and 14, and inspection trips will be made February 15 and 16, if there is sufficient interest in them the second day.

Leading highway and landscape authorities will appear on the program, to be announced in detail in January.

#### LOUISVILLE PARTY.

The Louisville Retail Nurserymen's Association held its annual party November 13, at Evergreen Inn, Louisville, Ky. No business was conducted at this meeting, as the evening was devoted to entertainment.

Guest speakers included Maj. Paul Yost, Jefferson county forester, and E. P. White, county commissioner. Among other prominent guests were Dr. Edward Stivers and Mr. Smith, manager of the Masonic home at Lyndon, Ky.

#### RED CEDAR GERMINATION.

Rapid and satisfactory germination of seeds of eastern red cedar, *Juniperus virginiana*, may be insured by removing the waxy coat of the seeds and overcoming the resting condition of the embryo by stratifying the

## EVERGREENS IN TRUCK OR CARLOTS

### Regret No Boxing

We quote the following prices on lots of 10 or more; for less than 10, add 10 per cent.

### EVERGREENS, CONIFEROUS

<i>Arborvitae, American,</i>		<i>Juniper, Meyer's Blue,</i>	
3 to 4 ft.....	\$2.50	18 to 24 ins.....	\$2.00
<i>Arborvitae, American Pyramidal, 3 to 4 ft.</i>	<b>3.00</b>	24 to 30 ins.....	2.75
4 to 5 ft.....	<b>4.00</b>	30 to 36 ins.....	3.50
<i>Arborvitae, Berckmans Golden, 18 to 24 ins.</i>	<b>2.25</b>	<i>Juniper, Pfister's, 30 to 36 ins.</i>	<b>2.75</b>
24 to 30 ins.....	<b>2.75</b>	36 to 42 ins.....	3.75
30 to 36 ins.....	<b>3.50</b>	<i>Juniper, Savin, 30 to 36 ins.</i>	<b>2.50</b>
<i>Arborvitae, Globe, 18 to 21 ins.</i>	<b>2.75</b>	36 to 42 ins.....	<b>3.00</b>
21 to 24 ins.....	<b>3.50</b>	<i>Pine, Austrian, 3 to 4 ft.</i>	<b>2.50</b>
<i>Hemlock, Canadian, 2 to 3 ft.</i>	<b>2.50</b>	4 to 5 ft.....	3.25
3 to 4 ft.....	<b>3.50</b>	6 to 6 ft.....	4.00
4 to 5 ft.....	<b>4.75</b>	6 to 7 ft.....	5.00
<i>Juniper, Andorra, 24 to 30 ins.</i>	<b>2.00</b>	<i>Pine, Mugho, 18 to 24 ins.</i>	<b>2.25</b>
30 to 36 ins.....	<b>2.50</b>	24 to 30 ins.....	2.75
3 to 4 ft.....	<b>3.50</b>	30 to 36 ins.....	3.25
<i>Juniper, excelsa stricta,</i>		<i>Pine, Ponderosa, 3 to 4 ft.</i>	<b>2.50</b>
18 to 24 ins.....	<b>2.00</b>	<i>Pine, Red (resinosa), 3 to 4 ft.</i>	<b>2.50</b>
24 to 30 ins.....	<b>2.50</b>	4 to 5 ft.....	3.25
<i>Juniper, Irish, 4 to 5 ft.</i>	<b>2.50</b>	<i>Pine, Scotch, 4 to 5 ft.</i>	<b>2.75</b>
5 to 6 ft.....	<b>3.25</b>	5 to 6 ft.....	3.50
6 to 7 ft.....	<b>4.00</b>	<i>Retinospora plumosa, 2 to 3 ft.</i>	<b>2.00</b>
		3 to 4 ft.....	2.75
		<i>Retinospora squarrosa veitchii,</i>	
		2 to 3 ft.....	<b>2.25</b>
		3 to 4 ft.....	<b>3.00</b>

### EVERGREENS, BROAD-LEAVED

	Per 100
<i>Buxus sempervirens</i> (Standard Box), 6 to 8 ins., 4-yr. T.....	<b>\$20.00</b>
<i>Buxus sempervirens</i> (Standard Box), 8 to 10 ins., 5-yr. T.....	25.00
<i>Buxus sempervirens</i> (Standard Box), 10 to 12 ins., 6-yr. T.....	30.00
<i>Buxus suffruticosa</i> (Dwarf Box), 6 to 8 ins., 5-yr. T.....	25.00
<i>Buxus suffruticosa</i> (Dwarf Box), 8 to 10 ins., 6-yr. T.....	30.00
<i>Buxus suffruticosa</i> (Dwarf Box), 10 to 12 ins., 7-yr.....	40.00

<i>Abelia grandiflora, 2 to 3 ft.</i>		<i>Nandina domestica,</i>	
E&B .....	<b>\$1.50</b>	18 to 24 ins.....	<b>\$1.50</b>
3 to 4 ft., B&B .....	<b>2.00</b>	2 to 3 ft.....	<b>1.75</b>
<i>Elaeagnus fruitlandi, 18 to 24 ins.</i>		<i>Pyracantha angustifolia,</i>	
2 to 3 ft.....	<b>1.50</b>	2 to 3 ft.....	<b>1.75</b>
3 to 4 ft.....	<b>2.00</b>	3 to 4 ft.....	<b>2.00</b>
<i>English Laurel, 2 to 3 ft.</i>		<i>Pyracantha laalandi, 2 to 3 ft.</i>	
3 to 4 ft.....	<b>2.50</b>	2 to 3 ft.....	<b>2.00</b>
<i>Erica gracilis, 5-yr. clumps.</i>	<b>.75</b>	<i>Pyracantha rogersi, 2 to 3 ft.</i>	
<i>Euonymus patens, 18 to 24 ins.</i>	<b>1.25</b>	3 to 4 ft.....	<b>2.50</b>
24 to 30 ins.....	<b>1.75</b>	4 to 5 ft.....	<b>3.50</b>
30 to 36 ins.....	<b>2.25</b>	5 to 6 ft.....	<b>4.50</b>
<i>Hypericum moserianum, 4-yr. clumps.</i>	<b>.75</b>	<i>Rhododendron catawbiense,</i>	
<i>Ligustrum lucidum, 2 to 3 ft.</i>	<b>2.00</b>	2 to 3 ft.....	<b>2.25</b>
3 to 4 ft.....	<b>2.75</b>	2 to 3 ft.....	<b>2.00</b>
<i>Mahonia aquifolia, 24 to 30 ins.</i>	<b>2.00</b>	<i>Rhododendron maximum,</i>	
36 to 38 ins.....	<b>2.75</b>	3 to 4 ft.....	<b>2.75</b>

## WAYNESBORO NURSERIES, INC.

Waynesboro, Virginia

## APPLE and PEAR SEEDLINGS

### TWO-YEAR APPLE TREES ONE-YEAR PEACH TREES

**REMEMBER!** We are centrally located on Four Railroads and many Truck Lines and can get stock to you when wanted. In these days of car shortages, strikes, etc., this is worth careful consideration.

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# ASPARAGUS, RHUBARB, GRAPES, PRIVET and CANNAS

Place your order now for shipment when desired. Our Cannas will be dug in late fall and will be ready for shipment any time after February 1 until the end of the spring planting season. Other items offered can be shipped promptly, or as desired, from now until the end of the spring shipping season.

## RHUBARB ROOTS

VARIETIES: VICTORIA, MYATT'S LINNAEUS

	25	100	250	1000
2-in. cal. and up, forcing grade.	\$3.50	\$10.00	\$24.00	\$90.00
1½ to 2-in. caliper.	3.00	8.50	20.00	75.00
1 to 1½-in. caliper.	2.50	6.00	14.00	50.00
5/8 to 1-in. caliper.	2.00	5.00	11.00	40.00
½ to 5/8-in. caliper.	1.75	4.00	9.00	30.00

## GRAPEVINES

Our Grapes have heavy fibrous root systems, with many lengthy canes at the top. Write for prices on large numbers.

CONCORD (blue), FREDONIA (black),

NIAGARA (white):	Each	10	100
2-year, No. 1 grade.....	\$0.25	\$1.75	\$14.00
1-year, No. 1 grade.....	.20	1.50	10.00
CATAWBA (mahogany), MOORE'S DIAMOND (white), MOORE'S EARLY (black), PORTLAND (white), WORDEN (black):			
2-year, No. 1 grade.....	.30	2.25	17.00
1-year, No. 1 grade.....	.25	1.75	12.00
AGAWAM (red), BRIGHTON (red), CACO (red), DELAWARE (red):			
2-year, No. 1 grade.....	.35	2.50	20.00
1-year, No. 1 grade.....	.30	2.25	15.00

## PRIVET HEDGE PLANTS

Our soil and climatic conditions are ideal for the production of good Privet, and we guarantee our stock to be as well grown and developed in grade as any in this country. Write for special prices on large numbers.

CALIFORNIA PRIVET (*Ligustrum ovalifolium*)

	10	100	1000
6 to 12 ins., 2 canes or more....	\$0.65	\$ 5.00	\$ 40.00
12 to 18 ins., 3 canes or more....	.75	6.00	50.00
18 to 24 ins., 3 canes or more....	.85	7.00	60.00
2 to 3 ft., 4 canes or more....	1.10	9.00	80.00
3 to 4 ft., 5 canes or more....	1.50	13.00	120.00
4 to 5 ft., 6 canes or more....	2.25	21.00	200.00

IBOLIUM PRIVET (*Ligustrum ibolium*)

	6 to 12 ins., 2 canes or more....	12 to 18 ins., 3 canes or more....	18 to 24 ins., 3 canes or more....
6 to 12 ins., 2 canes or more....	.75	6.00	50.00
12 to 18 ins., 3 canes or more....	.85	7.00	60.00
18 to 24 ins., 3 canes or more....	1.00	8.00	70.00

2 to 3 ft., 4 canes or more....

	1.25	10.00	90.00
2 to 3 ft., 4 canes or more....	1.50	13.00	120.00

AMUR RIVER NORTH PRIVET

(*Ligustrum amurensis*)

	12 to 18 ins., 3 canes or more....	1½ to 2 ft., 3 canes or more....	2 to 3 ft., 4 canes or more....
12 to 18 ins., 3 canes or more....	1.00	8.00	70.00
1½ to 2 ft., 3 canes or more....	1.25	10.00	90.00

Free packing for cash with order.

Our Fall 1946—Spring 1947 Wholesale List offers a complete line of nursery stock. If you did not receive a copy, write us today. When requesting wholesale rates, please use your printed stationery.

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seeds over the winter until they are sown in the early spring. The procedure was described in the bulletin, "Nursery Notes," for November, 1946, issued by the department of horticulture at Ohio State University.

Removal of the waxy coat can be accomplished by soaking the seeds for several hours in alcohol or by pouring warm water over them. As soon as the water is brought to a boil it should be poured off. To insure complete removal of the coat, the opera-

tion should be repeated three times.

The resting condition of the embryo can be overcome by stratifying the seeds about December 15 to January 12 in flats of moist sand and peat, where they should be held at a temperature of about 40 degrees Fahrenheit for three months. A nursery cellar should provide satisfactory conditions. Germination of red cedar seeds is best at temperatures of 50 to 55 degrees and is considerably retarded at temperatures above 65 to 70 degrees. Therefore, early sowing

after stratification in well prepared seedbeds of sandy soil below 60 degrees in temperature is essential for rapid germination. The seeds should be sown around March 15 to April 1, so that they will have a month before the soil temperature goes above 60 degrees. Early sowing will also aid in reducing losses from damping-off.

MIAMI FLORAL CO., Miami, Okla., has started a nursery and named D. J. Waldhelm as manager.

# Broad-leaved Evergreens

By Guy M. Stricklen

The broad-leaved evergreens, also known as evergreen shrubs, are undoubtedly the most useful as well as the most beautiful of all the material used for landscape purposes. They are of a strictly informal nature, and any attempt to use them in a formal manner should be avoided. Their loose, graceful habit of growth and variation of foliage enable the landscape designer to obtain results which just cannot be obtained with the coniferous or needle-type evergreens.

Rhododendrons and azaleas are probably the best known of the evergreen shrubs, but in this classification will be found many other interesting and useful plants. Mountain laurel, hollies, including the Oriental sorts, evergreen barberries and the pieris, or fetterbush, are a few of the better known plants, but there are many others worthy of consideration. Most of this group do better in a partially shaded location rather than in the full sunlight. In full sun it is advisable to keep the roots mulched throughout the summer to prevent moisture evaporation.

As a rule, the evergreen shrubs prefer a somewhat acid soil, ranging from pH 5 to pH 4. They must never be cultivated and should have a 6 to 12-inch covering of oak leaves applied in the fall. In the spring, about two-thirds of this mulch should be removed and the lower layer, which has begun to decompose, should remain throughout the summer. This summer mulch conserves the moisture and keeps the plants cool at the roots. Ground covers, such as pachysandra, Vinca minor and pachistima, serve the purpose as well as leaves and are much neater in appearance, but do not supply the acid nourishment to be derived from the decayed oak leaves.

Broad-leaved evergreens should be planted in a soil mixture of one part light loam to two parts leaf mold, peat moss, or some form of humus and one part sand, which is entirely free of lime or any alkaline substance. As stated above, resort to no cultivation, but keep down weeds which will persist until the ground cover has reached a maximum growth or the leaf mulch has been applied. Weed-

ing should be done with care, so as not to disturb the roots, which are usually quite close to the surface. For this reason cultivation should always be avoided.

When broad-leaved evergreens are planted in a soil mixture as recommended, feeding should be unnecessary. Stimulation, when needed, may be administered by applying any of the reliable brands of fertilizers prepared especially for broad-leaved evergreens, offered on the market by reliable manufacturers. Cottonseed meal has been used with good results and should be applied at the rate of one-half pound to the square yard. Should a soil test show a reading of pH 6 or higher, it may be brought back to an acid condition by a treatment of one-half pound of aluminum sulphate to each square yard of surface area. Apply about May 1, again in June and again in July. Water thoroughly as each application is made.

Many of the broad-leaved group are quite hardy, while some will not stand a too severe exposure, and some discretion should be practiced in their use. This group of plants thrives best when transplanted in the spring rather than in the fall. Transplanting in the fall should be done not later than November 1. After

that date there is considerable risk; loss of buds and dying back may be the result.

The native varieties of rhododendrons usually survive Maryland winters excellently, as do most of the hybrid sorts. The winter of 1944 and 1945 was especially hard on rhododendrons, and it was odd to note the effect on certain varieties. Herbert Parsons, for instance, seemed to suffer most, with complete loss of foliage, shriveling of the stems and, in some instances, death of the plants. During the past summer, many of the affected plants have recovered and show no signs of ever having been injured, except for the scarcity of buds. But generally, the rhododendrons can be depended upon.

The evergreen barberries, such as Berberis julianae, sargentiana, verruculosa and others, generally freeze a little on the tips, but a light pruning takes care of this. Boxwood does best when protected from the full rays of the sun. A warm day in winter followed by freezing temperature at night causes burning of the foliage and some killing back. Slightly shaded locations are best. Practically all of the cotoneasters winter well if not in too moist a position.

American holly never seems to be affected by winter conditions. Ilex

## YEARLING PEACH TREES

2-yr. Roots, 1-yr. Tops

	Per 10	Per 100	Per 1000
2 to 3 ft., 5/16 to 7/16-in.....	\$5.00	\$40.00	\$300.00
3 to 4 ft., 7/16 to 9/16-in.....	5.50	45.00	350.00
4 to 5 ft., 9/16 to 11/16-in.....	6.00	50.00	400.00

Varieties. Listed in ripening order.

Golden Jubilee	Slappey	Elberta, Red	Sept. Belle
Halehaven	Hiley	Indian Cling	Kummel's Late

F.O.B. Hickory, N. C., packing additional. Free packing when cash accompanies order. All prices subject to stock being unsold on receipt of order.

Also, complete line of Coniferous and Broad-leaved Evergreens.

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Hickory, N. C.

# LINING-OUT STOCK

## For Fall 1946 and Spring 1947

	Per 100	Per 1000		Per 100	Per 1000
15,000 <i>Abies balsamea</i> , 2-yr., S., 1½ to 3 ins..	\$ 3.50	\$ 25.00	10,000 <i>Privet, California</i> , H.C., 12 to 18 ins....	\$ 4.50	\$ 35.00
500 4-yr., T., 4 to 8 ins.....	15.00	120.00	15,000 <i>Privet, Iboium</i> , H.C., 12 to 18 ins....	5.50	45.00
3500 TT, 8 to 12 ins.....	25.00	200.00	5000 <i>Privet, Ibhota</i> , H.C., 12 to 18 ins....	5.50	45.00
350 <i>Abies concolor</i> , T., 3 to 6 ins.....	20.00	160.00	30,000 <i>Pseudotsuga douglasii</i> ,		
875 TT, 10 to 14 ins.....	40.00	320.00	2-yr., S., 2 to 4 ins.....	5.00	40.00
3500 <i>Acer palm. atrop.</i> , from seed, 2-in. pots	30.00	250.00	2-yr., S., 3 to 6 ins.....	6.00	50.00
14,000 <i>Berberis thunbergi</i> (row run), 1-yr., S.	5.00	45.00	2200 4-yr., T., 3 to 5 ins.....	12.00	120.00
50,000 <i>Berberis thunbergi atropurpurea</i> ,			3000 <i>Rosa rugosa</i> , 1-yr., S., 3 to 6 ins.....	4.00	30.00
1-yr., S., 2 to 4 ins.....	2.50	20.00	500 <i>Sorbus americana</i> , 2-yr., T.....	15.00	120.00
2000 <i>Biotia aurea nana</i> , pot grafts.....	35.00	280.00	5000 1-yr., S., 1 to 2 ins.....	6.00	50.00
3500 <i>Celastrus orbiculatus</i> , 1-yr., S.	6.00	50.00	1000 <i>Symplocarpus racemosus</i> , H.C.,		
2000 <i>Chamaecyparis plumosa</i> , 1-yr., T.	15.00	140.00	12 to 18 ins.....	5.50	45.00
500 2-yr., T.....	20.00	160.00	1300 <i>Symplocarpus vulgaris</i> , H.C.,		
1800 3-yr., T., 8 to 12 ins.....	25.00	225.00	12 to 18 ins.....	4.50	35.00
1000 <i>Cham. plumosa argentea</i> , 1-yr., T.	15.00	140.00	500 <i>Taxus baccata repandens</i> , 1-yr., T.....	20.00	160.00
2000 <i>Cham. plumosa aurea</i> , 1-yr., T.	15.00	140.00	400 <i>Taxus canadensis stricta</i> , T., 6 to 10 ins.	35.00	300.00
1800 T., 8 to 10 ins.....	30.00	250.00	5000 <i>Taxus cuspidata</i> , 1-yr., T.....	20.00	180.00
900 TT, 8 to 12 ins.....	35.00	300.00	14,000 2-yr., T., 8 to 10 ins.....	30.00	250.00
500 <i>Cham. pisifera aurea</i> , 1-yr., T.....	15.00	140.00	10,000 3-yr., T., 8 to 12 ins.....	35.00	300.00
500 2-yr., T.....	20.00	160.00	3000 5-yr., TT, 8 to 10 ins.....	50.00	450.00
1000 <i>Cham. p. squarrosa velutina</i> , 1-yr., T.	15.00	140.00	4000 <i>Taxus cusp. brevifolia</i> , 2-yr., T.,		
1000 <i>Cornus alba sibirica</i> , H.C., 18 to 24 ins.	5.00	40.00	6 to 10 ins.....	35.00	300.00
2000 <i>Cornus florida rubra</i> , pot grafts.....	50.00	400.00	1000 <i>Taxus cusp. brevi. nana</i> , 2-yr., T.	35.00	300.00
5000 <i>Cydonia japonica</i> , 1-yr., S., 12 to 18 ins.	4.00	30.00	5000 1-yr., T.....	25.00	240.00
5000 <i>Daphne nerorum</i> (rooted cuttings)			9000 <i>Taxus cusp. brownii</i> , 2-yr., T.....	35.00	300.00
bare root (Spring 1947 shipment) ..	10.00	90.00	2500 TT, 8 to 12 ins.....	45.00	400.00
2000 <i>Euonymus radicans vegetus</i> ,			5000 <i>Taxus cusp. capitata</i> (from tip cuttings),		
T., 6 to 10 ins.....	25.00	200.00	T., 6 to 10 ins.....	35.00	300.00
1000 <i>Forsythia intermedia</i> , H.C., 18 to 24 ins.	6.00	50.00	(from seed), 5-yr., T., 8 to 12 ins.....	65.00	600.00
1200 <i>Forsythia intermedia spectabilis</i> , H.C.,			3000 2-yr., T.....	40.00	350.00
18 to 24 ins.....	6.00	50.00	4000 <i>Taxus media</i> (Halloran strain), 1-yr., T.	30.00	250.00
375 <i>Juniperus com.</i> (Oldfield), 3-yr., T.,			2000 2-yr., T., 6 to 10 ins.....	45.00	400.00
3 to 6 ins.....	15.00	120.00	3000 <i>Taxus media</i> (Hathfield), 1-yr., T.....	30.00	250.00
2500 <i>Juniperus excelsa stricta</i> , 2-yr., T.....	30.00	250.00	5000 3-yr., T., 6 to 10 ins.....	35.00	300.00
1000 <i>Juniperus hibernica</i> , 2-yr., T.....	25.00	240.00	2000 2-yr., T., 8 to 12 ins.....	50.00	450.00
500 3-yr., T., 8 to 12 ins.....	30.00	250.00	4000 <i>Taxus media</i> (hicksii), 1-yr., T.....	25.00	200.00
1500 <i>Juniperus pfitzeriana</i> , 2½-in. pots.....	20.00	190.00	6000 2-yr., T., 6 to 12 ins.....	35.00	300.00
1000 2-yr., T.....	30.00	250.00	10000 <i>Taxus media</i> (Moon's columnaris), 1-yr., T.....	35.00	300.00
500 <i>Juniperus pfitz.</i> Kallay comp., 2-yr., T.....	30.00	120.00	300 <i>Thuya doborai</i> pyramidalis, pot grafts.....	35.00	300.00
1000 <i>Lonicera bella alpina</i> , H.C., 18 to 24 ins.	6.50	55.00	500 1-yr., T.....	20.00	180.00
1500 <i>Lonicera grandiflora rosea</i> , H.C.,			1000 <i>Thuya occ. boothii</i> , 1-yr., T.....	20.00	180.00
18 to 24 ins.....	6.50	55.00	1500 <i>Thuya occ. elegansissima</i> , 2-yr., T.,		
300 <i>Lonicera halliana</i> , 1-yr., T.....	10.00	80.00	6 to 10 ins.....	30.00	250.00
9000 <i>Picea excelsa</i> , 3-yr., T., 3 to 6 ins.....	12.00	100.00	900 TT, 8 to 12 ins.....	35.00	300.00
1500 TT, 18 to 24 ins.....	45.00	400.00	5000 <i>Thuya occ. hooveri</i> , 1-yr., T.....	15.00	130.00
20,000 <i>Picea pungens</i> , 2-yr., S., 2 to 4 ins.....	6.00	50.00	2000 <i>Thuya occ. nigra</i> , 1-yr., T.....	18.00	150.00
5000 <i>Pieris japonica</i> , 2½-in. pots.....	25.00	200.00	2000 <i>Thuya occ. pyramidalis</i> , pot grafts.....	35.00	300.00
2500 <i>Pinus banksiana</i> , 2-yr., S., 8 to 16 ins.....	3.50	20.00	20,000 <i>Taugia canadenensis</i> (collected seedlings), 6 to 10 ins.....		
1200 3-yr., T., 6 to 12 ins.....	5.00	35.00	6 to 12 ins.....	40.00	
40,000 <i>Pinus resinosa</i> , 2-yr., S., 2 to 4 ins.....	5.00	35.00	12 to 18 ins.....	20.00	160.00
4000 <i>Pinus rigida</i> , 3-yr., S., 8 to 14 ins.....	3.00	22.50	30.00	240.00	
1000 3-yr., T., 5 to 10 ins.....	6.00	50.00	5000 <i>Wistaria sinensis</i> , 1-yr., T., grafts.....	35.00	300.00
50,000 <i>Pinus strobus</i> , 2-yr., S., 2 to 4 ins.....	5.00	35.00	All the above material is grown by our best growers of lining-out material. All F.O.B. shipping points, packing additional at cost. Usual terms to trade accounts. All pot grafts will be ready in May, 1947. All thin material is listed subject to prior sale.		
1500 3-yr., T., 2 to 4 ins.....	6.00	50.00			

E. D. ROBINSON SALES AGENCY,

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"A friendly, efficient service"

*aquifolium* does not come through quite so well, and the same may be said of *Ilex cornuta*. They both need some protection and do best when given an eastern or southern exposure. Of the *crenata* group, *Ilex crenata microphylla* is much the best. It seldom burns, and the foliage remains bright and glossy throughout the winter. *Fortunei* also stands up fairly well. *Ilex crenata convexa* suffers when transplanted in the fall, but seems to take the winters well when handled in the spring.

*Kalmia latifolia* is one I have never seen injured in the slightest. *Prunus laurocerasus* burns rather easily. *P. l. schipkaensis* holds up better than *angustifolia* or *caroliniana*. These kill back rather easily and we have given up trying to grow them. *Ligustrum lucidum* is only occasionally af-

fected in severe seasons. The *manonias* do best with some protection; *bealei* seems to be the hardier, but *aquifolium* is much more graceful in habit and fits in well in foundation plantings. *Leucothoe catesbeiana* does not appear to suffer from winter injury. *Lonicera nitida* and *Lonicera pileata* both burn badly, but if pruned in the early spring come back well. The roots are seldom injured.

*Pieris japonica*, undoubtedly one of the most handsome and useful of the broad-leaved evergreens, never seems affected by any sort of winter weather. This plant must have partial shade for best results. *Pieris floribunda* has never done too well when transplanted away from its native habitat. *Pyracantha* will always burn when subjected to the blast of the northwest winds, but when planted

## LANDSCAPE MATERIAL

in best assortment — Japanese Red Maples, Taxus, Magnolias, Evergreens, Flowering Shrubs, Privet, etc.

No Boxing. Write for list.

DEERFIELD NURSERIES  
Deerfield Street P.O., N. J.

facing the east or south, it frequently holds its foliage throughout the winter. It will not fruit when grown in the shade or in too moist or too rich a soil. Too severe pruning also robs it of its fruiting wood.

*Skimmia japonica* seems to take

it, no matter how severe the weather. *Stransvaesia* usually sheds its foliage by the first of the year, but seldom kills. *Abelia grandiflora* seems to be affected only in severe winters, but the variety Edward Goucher has not proved quite so hardy and does best when in a somewhat protected spot. *Viburnum rhytidophyllum* is a tough customer and an excellent subject where coarse foliage is desired. It is at its best on northwest corners.

With the azaleas, there is little trouble, with the exception of some few varieties. Varieties Pink Pearl, Salmon Beauty and Pericot's Double White and Double Pink have not proved so hardy as Hinodegiri and Amoena, etc. Coral Bells winters well, but does not hold its buds too well when exposed to northwest winds. The indica and ledifolia species are prone to suffer bud injury to some extent, especially when there is a warm spell in March or April followed by a freeze. Kaempferi and its hybrids can generally be counted upon to come through safely without bud injury.

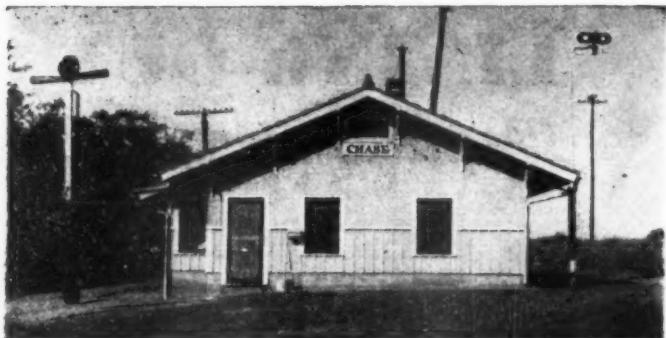
It has been conclusively proved that both winter and summer mulch is advisable for broad-leaved evergreens. These plants should never be permitted to become dry, and good drainage must be maintained.

The foregoing results are based on trials made in the eastern seaboard area and the hardiness of some of this family might be questioned by those in other localities. Locality, however, should have no bearing on the cultural directions herein stressed.

#### UNION STATION AT CHASE.

Perhaps the only union station in the country not owned by the railroads which serve it, and certainly one of the smallest, is located at Chase, Ala., home of the Chase Nursery Co. When the expanding business of this firm made a new station desirable, it received permission from the N. C. & St. L. railroad, owner of the property on which the station stands, to construct one. The station was the subject of an illustrated article in a recent issue of the N. C. & St. L. Bulletin.

Although it has none of the attributes of the usual large city union station, it may properly be called one, for Chase is served by two railroads, the N. C. & St. L. and the Southern. The outside finish of the compact building, 26x30 feet, is stucco, with a tile roof, and the grounds are attractively kept. It has all the necessary facilities, including separate waiting rooms for colored and white passengers; a bay window from



Union Station at Chase, Ala.

which the operator-agent can observe the trains which pass on either side of the station; a warehouse for handling express, and rooms for records and coal storage.

The heating arrangement is unique, consisting of a large, pot-bellied stove placed in a triangular space in the middle of the building. This permits the agent to fire the stove from his office and at the same time enables patrons in both waiting rooms to have equal access to the warmth. Heavy metal bars between

the stove and the two waiting rooms form a partition between them and the office.

Superior shipping facilities are now provided for the Chase Nursery Co. because of the foresight of its founders, Henry B. and Robert Chase. The firm was established in 1889 on those properties of the old Alabama Nursery Co. which were situated on the two railroad lines six miles northeast of Huntsville, Ala. The present packing house, 75x250 feet, is located between the two

## APPLE SEEDLINGS

	Per 100	Per 1000
1/4-inch and up, branched.....	\$3.50	\$30.00
1/4-inch and up, straight.....	3.20	28.00
No. 1, 3/16 to 1/4-inch, branched.....	2.90	25.00
No. 1, 3/16 to 1/4-inch, straight.....	2.90	25.00
No. 2, 2/16 to 3/16-inch, branched.....	2.10	18.00
No. 2, 2/16 to 3/16-inch, straight.....	2.10	18.00
No. 3, about 2/16-inch.....	1.40	12.00

## APPLE GRAFTS

Piece-Root, tape-wrapped.....	4.00	30.00
Whole-Root, tape-wrapped.....	5.00	40.00

Send for list of varieties available. Any special varieties grafted when customer furnishes the scions.

Grafting will begin soon after the first of the year.

## THE WILLIS NURSERY CO.

Ottawa, Kansas

	Per 100	Per 1000
Red-leaved Barberry, sdgs., 3 to 6 ins.....	\$ 6.00	\$ 50.00
Red-leaved Barberry, sdgs., 6 to 9 ins.....	8.50	75.00
Rosa Wichuraiana, 2-yr. T., 2 to 4 ft.....	20.00	175.00
Rosa Wichuraiana, 3-yr. T., 3 to 6 ft.....	25.00	225.00
Ampelopsis Quinquefolia, 2-yr. T.....	12.50	100.00
Ampelopsis Veitchii, 2-yr., medium.....	25.00	225.00
Ampelopsis Veitchii, 3-yr. TT.....	35.00	325.00
Zanthorhiza Apifolia, 3 to 5-stem strong divisions.....	12.00	100.00

The above available in quantity. 200 at 1000 rate.

FAIRVIEW EVERGREEN NURSERIES, Fairview, Pa.

# **HEADQUARTERS FOR STREAMLINER STRAWBERRY PLANTS**

We have grown Streamliner for three years and find it much better than any other Everbearer we have ever grown. We recommend that you take advantage of the publicity which will be given Streamliner during the coming season by listing it in your catalog and advertising. All leading growers who have thoroughly tested Streamliner state without fear of contradiction that it is the best of all the Everbearers. Streamliner has real strawberry flavor, is rich red color throughout, is excellent for eating fresh and is recommended for canning or freezing. Its spring crop compares favorably to that produced by today's leading standard varieties. Very productive. Streamliner makes a good fruiting bed.

If you are interested in large numbers of Strawberry plants, or in our pack-out service (whereby shipments are made direct to your customers under your tags), write for details. We have facilities to take care of your Strawberry plant business. Let us figure with you on your particular requirements.

<b>STANDARD VARIETIES</b>	Per 25	Per 100	Per 250	Per 1000
Blakemore, Dunlap, Missionary.....	\$0.35	\$1.15	\$2.00	\$7.00
Ambrosia Late, Big Joe, Gandy, Klon- dice, Massey, Maytime, Parsons Beauty, Robinson, Suwannee, South- land, Temple .....	.40	1.25	2.25	8.00
Catskill, Chesapeake, Dorsett, Fairfax, Fairpeak, Midland, Premier, Red- star, Starbright .....	.45	1.40	2.50	9.00

EVERBEARING VARIETIES	Per 25	Per 100	Per 250	Per 1000
Gem, Gemzata, Mastodon, Progressive, Evermore (Minn. 1166) . . . .	\$0.70	\$2.25	\$4.50	\$16.00
New Streamliner . . . . .	1.00	3.25	7.00	25.00
No extra charge is made for the package or packing on Strawberry plant orders. Prices quoted are for delivery as wanted during the coming shipping season, starting November 1, 1946, and ending June 1, 1947, and apply as follows:				
25 to 75 plants of one variety at the 25 rate. 100 to 225 plants of one variety at the 100 rate. 250 to 475 plants of one variety at the 250 rate. 500 plants or more of one variety at the 1000 rate.				

All quotations are F.O.B. Selbyville, subject to stock being unsold upon receipt of order.

Write for a copy of our wholesale list, offering a general line of fruit plants, garden roots, also evergreen and deciduous stock. Please use your printed stationery, showing you are entitled to wholesale rates, when requesting trade prices.

**BUNTINGS' NURSERIES, INC.**

lines, with sidetracks from each. Within five years after the firm had been founded, an entire village had grown up around its holdings, including the railroad station, packing houses, waterworks, an office building, a commissary and white and colored villages.

## FRAUD CONVICTION.

The conviction of Silas E. Pike and Ernest C. Pike, brothers, for using the mails to defraud was affirmed last month by the United States Circuit Court of Appeals at Chicago. The St. Charles, Ill., seedsmen drew sentences of five years each for the fraud, which involved mailing a million post cards promising a \$1 "surprise package" of seeds for 20 cents.

CONIFEROUS stock will be grown by William A. Avey, Mabscott, W. Va., whose retail business will be known as the William A. Avey Orchards & Nurseries.

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**BRIDGETON, N. J.**

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## ORNAMENTAL EVERGREENS

## Trees & Shrubs

#### **RAGATELLE NURSERY**

P. O. Huntington Station, N. Y.

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**Barberry**  
**Privet**

Write for wholesale price list.

## GARDNER'S NURSERIES

**Rocky Hill, Conn.**

# Viability of Acorns

By Eugene I. Roe

Because they dry out rapidly and lose their viability, acorns in this country usually are sown immediately after collection or stratified for spring sowing. Storage for longer periods ordinarily is not attempted, partly because oaks are not in common use in planting and partly because little information is available as to proper storage methods. Although the practice usually recommended is to store acorns cold and moist, this appears to be based more on theory than on any prolonged storage tests. In Europe, acorns of English oak, *Quercus robur*, a white oak, have been reported to retain about half of their original germination after three years' storage in sacks within sealed containers kept slightly above freezing, but no tests showing such prolonged life as this are known for any American oaks.

Since there may be times when the preservation of a large crop of acorns would prove desirable to tide over the intervening lean years, the results of a storage test on acorns on northern red oak, *Quercus borealis*, should be of interest. This study not only shows that these acorns can retain a fair degree of germinability for three and one-half years under sealed storage at a relatively low temperature, but also suggests that even better results may be possible if lower temperatures are used.

In April, 1942, a small lot of red oak acorns, collected on the Nicolet national forest, in Wisconsin, during October, 1941, was received for stratification at the Lake States forest experiment station. Prior to that time they had been stored in a burlap sack at temperatures averaging 40 to 50 degrees Fahrenheit, but unprotected against drying. Because of the latter condition, it is likely that they had suffered some loss in viability. How much this amounted to is unknown, since no germination tests were made either after collection or when the acorns were received. Because of a change in plans, the acorns could not be used that spring and hence were stored. About one-half bushel was put into an air-tight frozen-egg can and a like quantity in a burlap sack. Both sub-

lots were then placed in the station's refrigerated seed storage room at a temperature maintained at 40 degrees.

Germination was tested in the station's seed laboratory in June, 1943, when the acorns were twenty months old, and again in March, 1945, forty-one months after collection. Tests were run in sand flats, using both seeds which had been stratified for sixty to ninety days at 40 degrees and unstratified seeds, at air temperatures alternating from about 68 degrees (night) to 86 degrees (day). "Post-mortem" cutting tests were made when germination was complete, but in no instance were any ungerminated seeds found.

At the end of twenty months' storage at a relatively cold temperature (40 degrees), the acorns in the sack showed a complete loss of viability, while those in the air-tight can still had an average effective germination (deducting for those which showed

root development but no top growth) of fifty per cent. This figure considers both untreated and stratified seeds and is based on 100 acorns sampled from throughout the can. More specifically, it was found that the actual germination of untreated seeds in the can was sixty-three per cent, while that of stratified seeds was fifty-two per cent. Cutting tests based on 100 untreated seeds from throughout the sack, on the other hand, showed acorns completely spoiled.

When the 1945 test was begun, it was found that many of the acorns in the can had recently sprouted. Some of these had healthy, vigorous radicles one-half inch in length; others had dead, withered tips. Acorns in the lower two-thirds of the can were covered with a dense felt of white mold, while those in the top third were relatively free from such growth. Those in the bottom were quite wet, since the can contained about thirty centimeters of a brown liquid presumed to be a mixture of water and soluble excreta from the seeds.

Of 196 acorns sampled at random from the upper part of the can, only twenty-six per cent showed emergence of the radicles, and these were

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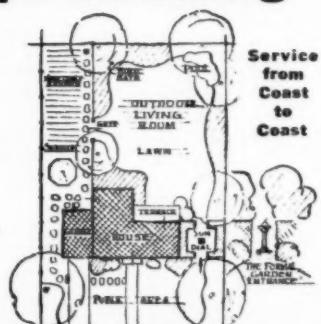
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Eugene I. Roe is silviculturist at the Lake States forest experiment station, maintained by the United States Department of Agriculture, Forest Service, at St. Paul, Minn., in cooperation with the University of Minnesota.

mostly living. On the other hand, acorns from the bottom of the can were much farther along toward germination. Of the 108 sampled here, sixty-two per cent had sprouted, and their radicles were practically all dead. Just why sprouting had occurred is not definitely known. It seems plausible that the build-up of moisture within the seed can from the respiration of the acorns may have been sufficient that many seeds completed their afterripening and began to germinate despite the unfavorable temperature. Support for this explanation is given by the fact that sprouting was much farther advanced in the bottom of the can where there was a definite accumulation of moisture.

Since the sprouted seeds, even when alive, could not have been sown feasibly, because of the length of the radicles, they were not included in the germination test samples. Some of the acorns tested were cracked at the apex, but none showed actual emergence of the radicle. All could, hence, have been sown in a practical nursery operation.

Tests based on 100 acorns from the upper half of the can and forty-one from the bottom showed that actual germination at the end of forty-one months' storage was still fairly high, ranging from thirty-six per cent in the upper part of the can to twenty-four per cent in the bottom, where the acorns were wet and moldy. However, a fairer measure of storage conditions is given by the effective germination; that is, the proportion of the total number of acorns present, both sprouted and unsprouted, which produced good seedlings. This value, which takes into account the loss of seeds that sprouted in storage and could not, therefore, be used, was twenty-seven per cent for the acorns from the upper part of the can, but only nine per cent for those from the bottom.

If as many as one-fourth of the red oak acorns stored could still produce seedlings after three and one-half years of damp and not too cold storage, it should be possible to work out conditions which will permit even higher survival for this and other species. The most obvious step would be to lower the storage temperature enough to reduce respiration to a minimum, thus preventing moisture accumulation within the seed containers. Since acorns of English oak show fair retention of viability when stored at temperatures slightly above freezing (about 33 to 34 degrees), those of red and even other oaks would likely be benefited by similar storage. Comprehensive studies to determine

# VEGETABLE ROOTS

## VICTORIA RHUBARB

### Whole Roots

	100 to 250	250 to 1000	1000 to 5000	Per 100	Per 1000
1 1/2-in. and up.	\$10.00	\$9.50	\$9.00		
1 to 1 1/2-in....	6.00	5.50	50.00		
3/4 to 1-in....	5.00	4.50	40.00		

Ask for prices on quantity.

## ASPARAGUS

25 to 100	100 to 250	250 to 1000
--------------	---------------	----------------

Per 100	Per 1000
---------	----------

Paradise and Washington	3-yr., heavy ..	\$4.00	\$3.50	\$30.00
2-yr.....	2.80	2.30	18.00	
1-yr.....	2.20	1.70	12.00	

## RED RHUBARB DIVISIONS

	Each
Canada Red .....	\$0.40
MacDonald .....	.30

## HORSE-RADISH

25 to 100	100 to 250	250 to 1000
--------------	---------------	----------------

Each	Per 100	Per 1000
------	---------	----------

Cuttings .....	\$0.02	\$1.75	\$15.00
Whole Roots ..	.04 1/2	4.00	35.00

## NOW AVAILABLE

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Well formed 3-yr., 12 to 18 ins., Blueberries and St. Regis Red Raspberry Transplants.

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**C. R. BURR & CO., INC.**  
Manchester, Conn.

the optimum storage temperature for such seeds are needed.

Because of the fact that good crops of acorns usually occur at two to three-year intervals, the goal should be to work out storage methods which would permit complete retention of viability for at least the interval between crops. A constant supply of acorns of high quality should be helpful to the nurseryman who desires to keep his production on a steady basis.

### INLAND EMPIRE SOIL CONSERVATION NURSERY.

Among the soil conservation nurseries operated in various parts of the country by the United States Department of Agriculture is the Inland Empire Nursery, at Pullman, Wash., whose primary functions are the testing of grasses, legumes, trees and shrubs to determine the best plant materials and cultural practices for control and prevention of soil and water losses; the production of improved strains of grasses and legumes for foundation seed stocks, and the embodiment of findings in conservation plantings on farms in soil conservation districts in the northwest.

Of the 9,000 grasses and legumes given observational testing, which included native collections, foreign plant introductions, grasses from other nurseries and experiment stations and commercial seed lots, five per cent were found better than commercial varieties in initial tests and have been included in secondary trials in solid seedlings to determine their conservation possibilities. Other tests include comparison of strain types, cultural trials, seed productions and field planting trials.

Given observational testing for conservation use were 460 tree and shrub accessions. Forty per cent were from other regions of the soil conservation service, thirty per cent were native collections, fifteen per cent were from other federal and state agencies, eight per cent were from commercial sources and seven per cent were foreign plant introductions. Of the initial group, 278 tree and shrub accessions remain in the nursery trials.

Seven per cent of the kinds tested have been superior to their respective checks and are included in secondary conservation trials. The more promising species include bladder senna, which has been outstanding for use in the windward row shelterbelts; American plum, which is the most promising intermediate-height shrub for the second row of shelterbelt plantings; trailing raspberry, which

### ADDITIONAL SURPLUS AT REASONABLE PRICES

In addition to the stock offered in the two previous issues of the American Nurseryman, we offer:

<b>CORNUS AMOMUM.</b>	Silky Dogwood.	Per 100	Per 1000	
4 to 6 ins. seedlings...	2.00	16.00	\$ 8.00	
6 to 12 ins. seedlings...	1.50	12.00		
12 to 18 ins. seedlings...	2.50	20.00		
<b>CORNUS STOLONIFERA.</b>	Red Osier Dogwood.			
6 to 12 ins. 1-yr. C....	2.00	16.00		
12 to 18 ins. 1-yr. C....	3.00	25.00		
18 to 24 ins. 1-yr. C....	4.00	35.00		
12 to 18 ins. branched...	6.00	.....		
18 to 24 ins. branched...	8.00	.....		
<b>DEUTZIA SCABRA (CRENATA) ROSEA</b>	(Double).			
<b>DEUTZIA SCABRA, PRIDE OF ROCHESTER.</b>				
6 to 12 ins. 1-yr. C....	2.00	16.00		
12 to 18 ins. 1-yr. C....	3.00	25.00		
12 to 18 ins. branched...	6.00	.....		
18 to 24 ins. branched...	8.00	.....		
2 to 3 ft. branched....	10.00	.....		
<b>PRIVET. IBOTA.</b>				
6 to 18 ins. liners....	2.50	20.00		
12 to 18 ins. branched...	3.50	30.00		
18 to 24 ins. branched...	5.00	45.00		
<b>TILLA AMERICANA.</b>	American Linden.			
4 to 6 ins. seedlings...	1.75	15.00		
6 to 12 ins. seedlings...	2.50	20.00		
12 to 18 ins. seedlings...	3.50	30.00		
18 to 24 ins. seedlings...	5.00	.....		
2 to 3 ft. seedlings....	8.00	.....		

We have about 5000 well ripened June-bud Peach in varieties: Belle of Ga., Early June, Elberta, Halehaven, J. H. Hale, Redhaven, Rochester and South Haven, and offer these in grades as follows:

18 to 24 ins., 15c; 2 to 3 ft., 25c, and 3 ft. up, 35c. Or will quote the entire lot at 5¢ less per tree.

We want Evergreen Liners in variety and ask you to quote on anything you have in surplus, even small lots.

You still have 6,000 trees of the stock offered in the two previous issues of American Nurseryman and ask that you use these also in making up your orders. Shipment can be made now or reservations can be made for Spring. Orders for immediate shipment are given preference. 5 per cent and free packing for cash in full with order. C.O.D. shipments made only when 25 per cent of order is sent. Our usual terms to approved accounts.

Visiting nurseriesmen are welcome when in the McMinnville nursery area. Call 375X; we will be glad to contact you at any time.

### O. H. PERRY NURSERY CO.

McMinnville, Tenn.

### 600 SURPLUS SHADE TREES

		Height	Price each
20	American Elm	10 to 12 ft.	\$2.00
50	Chinese Elm	10 to 12 ft.	2.00
40	Chinese Elm	12 to 15 ft.	3.00
20	Red Oak	10 to 12 ft.	2.00
100	Norway Maple	6 to 8 ft.	1.00
50	Russian Mulberry, heavy	8 to 10 ft.	2.50
100	Mountain Ash	5 to 6 ft.	.80
50	Hackberry	10 to 12 ft.	2.00
40	American Plum	8 to 10 ft.	2.00
30	Silver Poplar	12 to 15 ft.	3.00
100	White Birch	5 to 6 ft.	.80

\$900.00 for the lot.

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Scottville, Mich.

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\$30.00 per 100,

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## LINING-OUT STOCK For Spring 1947.

Offered subject to prior sale.

Per 100

<i>Ampelopsis Veitchii</i> , 1-yr. sdigs....	\$6.00
<i>Berberis Atropurpurea</i> , Red-leaved,	
1-yr. sdigs., row run.....	5.50
6 to 9 ins., row run.....	7.50
9 to 12 ins., row run.....	9.00
<i>Calycanthus Floridus</i> , 6 to 12 in. sdigs..	6.00
<i>Celastrus Orbiculatus</i> , 6 to 12-in. sdigs..	4.50
<i>Celastrus scandens</i> , 6 to 12-in. sdigs..	4.50
<i>Euonymus Vegetus</i> , 1-yr. tr.,	
3 to 6 ins.....	18.00
<i>Forsythia Spectabilis</i> , H.W.,	
cuttings.....	5.00
<i>Hibiscus Coelesis</i> x W.R. Smith	
g. ft. ....	10.00
Single blue and single white	
respectively.....	5.00
<i>Philadelphia Coronarius</i> , cuttings .....	7.50
<i>Spiraea Vanhouttei</i> , cuttings .....	5.00
<i>Weigela Rosea</i> , cuttings.....	5.00

### THE FOLLOWING GRAFTS FROM POTS.

<i>Cornus Florida Rubra</i> .....	40.00
<i>Fagus Sylvatica Purpurea</i> .....	75.00
<i>Fagus Sylvatica Rivularis</i> .....	75.00

### Transplanted Grafts

<i>Biota Aurea Nana</i> .....	15.00
<i>Cham. Obtusa Gracilis</i> .....	50.00

### Evergreen Rooted Cuttings

<i>Chamaecyparis Pisifera</i> .....	9.00
<i>Chamaecyparis Pisifera Aurea</i> .....	9.00
<i>Chamaecyparis Plumosa</i> .....	9.00
Transplants.....	31.00
<i>Chamaecyparis Plumosa Aurea</i> .....	9.00
Transplants.....	31.00
<i>Chamaecyparis Plumosa</i> .....	9.00
<i>Sulphurea</i> .....	9.00
<i>Ilex Crenata Bullata</i> .....	10.00
<i>Ilex Crenata Helleri</i> .....	10.00
<i>Ilex Crenata Latifolia</i> .....	10.00
<i>Juniperus Pfitzeriana</i> .....	12.00
<i>Juniperus Hibernica</i> .....	9.00
<i>Juniperus Excelsa Strigata</i> .....	12.00
1-yr. transplants.....	20.00
<i>Juniperus Sabina</i> .....	9.00
<i>Pleris Japonica</i> .....	15.00
<i>Rhododendron</i> (hybrid seedlings).....	15.00
<i>Taxus Cupidata</i> , spreading.....	9.00
2-yr. transplants.....	35.00
<i>Taxus C. Capitata</i> , upright.....	12.00
1-yr. transplants.....	30.00
<i>Taxus C. Nana</i> .....	12.00
<i>Taxus Hatfieldii</i> , 2-yr. tr. ....	12.00
1-yr. tr. ....	40.00
<i>Taxus Glauca</i> .....	10.00
1-yr. tr. 6 to 8 ins.....	30.00
<i>Taxus Intermedia</i> .....	10.00
<i>Thuya Globosa</i> .....	10.00
<i>Thuya Nigra</i> .....	10.00
<i>Thuya Pyramidalis</i> .....	10.00
<i>Thuya Wariana</i> .....	10.00
<i>Thuya Woodwardii</i> , 1-yr. tr. ....	20.00
<i>Viburnum Carlesii</i> , 1-yr. tr. gfts....	75.00

### AZALEAS

<i>Calandulacea</i> , Kaempferi, Mollis, Poukhanensis, Rosea, Schlippenbachii.	
Rooted cuttings.....	10.00
Except Kaempferi, which is.....	12.00
F.O.B. shipping point, New England.	
Packing and shipping.....	
Holland-grown Stock advertised in issue for December 1. See page 27.	
<b>Texas Everbearing Fig Tree</b>	
2 to 3 ft.....	25.00
3 to 4 ft.....	30.00
4 to 5 ft.....	35.00

### Michigan Peat

By far the best for propagating, growing on young stock. \$14.00 per ton in bulk carload lots. Write for prices on smaller quantities.

### Tree Labels

Paper with your name and address printed on them. 5000 for \$7.50. Per 1000

Plastic-wired tree labels	
(1000 in carton).....	\$12.00
Aluminum tree labels (500 in carton).....	12.00
I. H. Miller Binding Services and Rolls; also Binder Twine and Rope; Ra-Pid Gro, the best concentrated double fertilizer on the market; Tobaccine, concentrated tobacco and DDT insecticide, water soluble, the greatest all-around efficient insecticide.	

### ARTHUR DUMMETT

Phone 8-1340

63 Anderson Rd.      Bernardsville, N. J.

has consistently outproduced the commercial raspberries grown dryland in the zone, and Scotch pine (improved form), which has been superior to all other evergreens in establishment and rate and type of growth for the leeward row of shelterbelts.

Seven different combinations of trees and shrubs are being tested to determine their value for wind protection and snowdrift control. And a hilltop snowbreak planting has been found adequately to control snowdrift formation on an adjacent steep slope. It also produced black locust fence posts valued at \$300 per acre from 8-year-old trees on a clay hilltop.

On slopes so steep that cultivating is impractical, seeding with blue wild rye just prior to planting black locust wood lots appears to be an effective measure. Field plantings test promising species and new cultural practices prior to common usage in plantings under actual use conditions on farms in soil conservation service districts. Tree stock production facilities, including overhead irrigation, are available for a sustained annual production of a million uncommon plants for use on farms in the soil conservation districts.

### FROSTPROOF APPLE.

Max Bazzanella, Mineral, Va., as signor to Max Nurseries, Mineral, Va., has obtained plant patent 722 for a new and distinct variety of apple, Frostproof.

It blooms May 18, after the danger of frost is well past, assuring a crop every year. It is a medium-size winter apple of a dark bronze color with a spicy flavor. It ripens in the fall along with the Winesap and other such winter apples.

It seems that a way has been found to set the blooming time back. Max Bazzanella has set the blooming time back thirty days on two more new varieties of apples on which he has patents pending.

J. E. SMITH, Cumberland, Md., who for a number of years has specialized in the growing of perennials, is adding nursery stock to his business. He is now growing yews, hemlocks, azaleas and other ornamentals in variety.

BECAUSE of heavy sales earlier in the fall, Magnolia Gardens & Nurseries, Johns Island, S. C., announce that they will be unable to accept any more orders to be shipped until the fall of 1947. The nursery will be closed to cash-and-carry sales December 31 until that time.

## LINING-OUT STOCK

Here are a few items available in tree seedlings and shrubs for winter and spring shipment. Write for copy of our wholesale catalog for other items you may want.

### ACER DASYCARPUM.

	Per 100	Per 1000
6 to 12 ins. s.....	\$1.00	\$ 8.00
12 to 18 ins. s.....	1.25	10.00
18 to 24 ins. s.....	1.50	12.50

### BETULA NIGRA.

River Birch.	
6 to 12 ins. s.....	2.00
12 to 18 ins. s.....	2.50
18 to 24 ins. s.....	3.00

### QUERCUS. Oaks.

Alba. White Oak.	
Bicolor. Swamp White Oak.	
Red or Scarlet Oak.	
6 to 12 ins. s.....	4.00
12 to 18 ins. s.....	5.00
18 to 24 ins. s.....	6.00

### CERCIS CANADENSIS.

Redbud.	
4 to 6 ins. s.....	1.50
6 to 12 ins. s.....	2.00
12 to 18 ins. s.....	2.50

### ALTHAEA ROSEA.

Rose of Sharon.	
4 to 6 ins. s.....	.75
6 to 12 ins. s.....	1.00
12 to 18 ins. s.....	1.50

### DEUTZIA, PINK.

Crenata. Pink.	
Pride of Rochester.	
Creamy.	
6 to 12 ins. c.....	2.50
12 to 18 ins. c.....	3.00
18 to 24 ins. c.....	4.00

### PRIVET, AMUR

RIVER SOUTH.	
Southern Evergreen.	
4 to 6 ins. s.....	.60
6 to 12 ins. s.....	.80
12 to 18 ins. s.....	1.00

### SYMPHORICARPOS

VULGARIS.	
Coralberry.	
L.O. grade, c.....	2.00
6 to 12 ins. c.....	2.50
12 to 18 ins. c.....	3.00
18 to 24 ins. c.....	4.00

### WEIGELA, PINK.

L.O. grade, rooted, c.	4.00
6 to 12 ins. c.....	4.50
12 to 18 ins. c.....	5.00

### SPIRAEA FORTUNEI.

Callosa Rosea.	
6 to 12 ins. s.....	2.00
12 to 18 ins. s.....	2.50
18 to 24 ins. s.....	3.00

### PEACH, June Buds.

Per 10	Per 100	Per 1000
6 to 12 ins....	\$1.00	\$ 75.00
12 to 18 ins....	2.00	17.50
18 to 24 ins....	3.00	25.00
2 to 3 ft....	4.00	32.50

### Varieties of Peach:

Belle of Georgia	J. H. Hale
Golden Jubilee	Hale Haven
Elberta	Red Haven

Write for Wholesale Catalog.

**Boyd**  
NURSERY COMPANY  
McMinnville, Tenn.

# Distribution of Elm Phloem Necrosis

Phloem necrosis of the American elm, a virus disease, has been known to be quite generally distributed in sections of the Ohio river valley for some time. In 1942 Swingle reported the distribution as follows: The southern halves of Ohio, Indiana and Illinois; southeastern Missouri, northwestern Tennessee, Kentucky and the western part of West Virginia. Subsequently the disease was found at Jackson, Miss. In 1944 many trees were found to be diseased at St. Louis and Kansas City, Mo., and limited surveys for the disease were undertaken in Missouri and Kansas. It was found in widely scattered locations in Missouri and east-central Kansas, as far west as Topeka. During the same year, phloem necrosis was found to be the cause of an epidemic dying of elms at Peoria, Ill., and to occur as far north in the Wabash river valley as Williamsport and Attica, Ind. T. W. Bretz and R. U. Swingle reported on the current distribution of the disease in the Plant Disease Reporter of May 15, 1946.

Reports of suspected cases of the disease were received from Chattanooga, Tenn., and northern Mississippi, and its occurrence in northeastern Arkansas and northeastern Oklahoma was reported recently in a letter from Howard W. Larsh, chairman of the botany department at University of Oklahoma. Reports were received, also, indicating a northward extension of the disease area in parts of Missouri. To verify these reports and to secure additional information on distribution and recent spread of elm phloem necrosis, additional surveys were made in 1945, principally at the extremities of the area known to be involved in 1944. These surveys were not designed to be intensive nor exhaustive, but they did reveal a much wider distribution of the disease than had been previously known.

The presence of elm phloem necrosis was confirmed at Chattanooga, Tenn. Here the disease appeared to be well established, 166 infected trees having been counted in an exploratory survey of the city. This location is of interest because of its geographic location. There had been some thought that the Appalachian range with its sparse elm population might afford a sufficient barrier to prevent the movement of the disease into the eastern coastal region. However, with the disease in Chattanooga, which is near the southern extremity of certain valleys that run northeastward and open into the

east coast region, it seems possible that an entryway for the movement of the disease into the eastern and northeastern sections of the United States is now available. No evidence has yet been obtained to indicate that the disease is spreading toward the east coast states through the Piedmont region. No cases of elm phloem necrosis were found during an exploratory survey this year into northern and central Alabama and Georgia.

Diseased specimens were found at Pontotoc, Miss., in the northern part of that state, and a survey of Jackson, Miss., revealed that phloem necrosis was still active at this location. Here, however, although the disease was more widely distributed through the city than it was in 1941, the number of individual trees affected had actually decreased. This is quite contrary to its behavior in other locations in the disease area, where the usual course of the disease has been one in which the number

of diseased trees increases several-fold each season until the elm population has been greatly reduced.

No phloem necrosis locations were found in following the Arkansas river valley across the state of Arkansas. So far as is known, therefore, the disease is limited to the northeastern portion of that state, as reported by Larsh, and this suggests a possible movement into this area from southeastern Missouri and western Tennessee. Well established infection centers were found in the extreme southwestern section of Missouri in 1944. It is not surprising, therefore, that the disease has been found in northeastern Oklahoma (at Bartlesville and Miami), as reported by Larsh and confirmed by T. W. Bretz, nor that it is also present at Parsons, Kan., according to information received from L. E. Melchers, of Kan-

## Northern-grown Lining-out Stock

	Per	Per
Aronia melanocarpa.	100	1000
1 to 2 ft. ....	\$5.00	\$45.00
Betula paprifera,	1 to 2 ft.	6.00
6.00	50.00	
Clethra alnifolia,	1 to 2 ft.	5.00
5.00	45.00	
Cornus paniculata,	1 to 2 ft.	6.00
6.00	50.00	
Fagus americana,	6 to 12 ins.	5.00
5.00	40.00	
Fagus americana,	1 to 2 ft.	7.00
7.00	60.00	
Ilex verticillata,	1 to 2 ft.	5.00
5.00	40.00	
Prunus virginiana,	1 to 2 ft.	6.00
6.00	50.00	
Quercus rubra,	6 to 12 ins.	5.00
5.00	40.00	
Rhus typhina,	1 to 2 ft.	5.00
5.00	40.00	
Syringa vulgaris,	1 to 2 ft.	6.00
6.00	50.00	
Viburnum cassinoides,	1 to 2 ft.	6.00
6.00	50.00	
Viburnum dentatum,	1 to 2 ft.	6.00
6.00	50.00	
Viburnum lantana,	1 to 2 ft.	6.00
6.00	50.00	
Tsuga canadensis,	4 to 8-in. adgns.	4.00
4.00	30.00	
Tsuga canadensis,	8 to 12-in. adgns.	5.00
5.00	40.00	
Tsuga canadensis,	4 to 8-in. tr.	20.00
20.00	180.00	

This stock is all first-quality northern-grown collected seedlings, except as noted.

ISAAC LANGLEY WILLIAMS  
P.O. Box 388  
Exeter, N. H.

**PRINCETON NURSERIES**  
of PRINCETON, N. J.  
**SUPERIOR**  
**Hardy Ornamentals**

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All slow-grown dense specimens. Red clay soil.  
Priced by height and spread. 18x18 ins. to 24x24  
ins. in unlimited quantities. Also large specimens  
up to 5 ft. Write for price list.

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High Point, N. C.

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**WONDERLAND NURSERIES**  
Ellerson, Va.

Per 100

200	Carolina Poplar,	3 to 5 ft.	\$5.00
250	Lombardy Poplar,	3 to 5 ft.	5.00
150	Salix Caprea,	2 to 3 ft.	6.00
100	Salix Caprea,	3 to 4 ft.	7.00
150	Salix Fertileandra,	2 to 3 ft.	6.00
50	Salix Pendulina,	3 to 4 ft.	6.00
100	Salix Vitellina,	2 to 3 ft.	6.00
150	Ibiliaria Privet,	12 to 18 ins.	4.50
500	Ibiliaria Privet,	12 to 18 ins.	4.50
900	Forstyrilla Intermedia,	18 to 24 ins.	5.00
1400	Forstyrilla Inter. Spec.	18 to 24 ins.	5.00
600	Forstyrilla Fortunei,	18 to 24 ins.	5.00
1100	Lonicera Bella Albita,	18 to 24 ins.	5.50
600	Lonicera Tenuifolia Alba,	18 to 24 ins.	5.50
700	Lonicera Grandiflora	18 to 24 ins.	5.50
100	Sambucus Aurea,	18 to 24 ins.	5.50
300	Symphoricarpos Racemosus,	12 to 18 ins.	4.50
50	Symphoricarpos Vulgaris,	12 to 18 ins.	3.50
100	Ampelopsis Engelmanni,	1-yr.	4.00
800	Ampelopsis Quinquefolia,	1-yr.	4.00
400	Ampelopsis Pterophylla		5.00
1200	Acer Saccharinum,	12 to 18 ins.	2.00
550	Berberis Korean,	6 to 8 ins.	1.00
200	Caragana Arborescens,	4 to 6 ins.	4.00
2250	Celastrus Orbiculatus		5.00
150	Celastrus scandens		5.00
4300	Cydonia Japonica,	12 to 18 ins.	3.00
700	Rosa Rugosa,	3 to 6 ins.	3.00

Per 1000

Berberis Thunbergii,	3 to 6 ins.	\$12.00
Berberis Thunbergii,	6 to 9 ins.	20.00
Berberis Thunbergii,	9 to 12 ins.	30.00

**ADAMS NURSERY, INC.**

Westfield, Mass.

sas State College of Agriculture. The southwestward extension of the disease from this general area remains to be determined.

An extension of the known disease area to the north and northwest of Missouri also resulted from surveys into southern Iowa and southeastern Nebraska. The disease appeared to be more or less continuous on either side of the Missouri river from Kansas City northward, for approximately 100 miles. In Nebraska, the northernmost extension is in the vicinity of Auburn, about twenty-five miles north of the Kansas-Nebraska border. In Iowa infected trees were found at Shenandoah, but none was observed north of this city. Here the movement appears to have followed the Missouri river valley northward, and all indications are that the disease is new in this area. Although, in Missouri, phloem necrosis has been found in the north-central section, no evidence has been secured to indicate a northward movement into south-central Iowa. However, infected trees have been found as far north as Burlington, Ia., indicating a northward movement along the Mississippi river, for the disease is practically continuous from St. Louis, Mo., to that city.

To summarize, phloem necrosis is now known to occur in parts of the following states: Ohio, Indiana, Illinois, Missouri, Iowa, Nebraska, Kansas, Oklahoma, Arkansas, Mississippi, Tennessee, Kentucky and West Virginia. The disease area extends from southeastern Ohio and southeastern Tennessee westward to eastern Kansas, northeastern Oklahoma and southeastern Nebraska. A southern projection of the area extends to Jackson, Miss. The northern limit is approximately along the forty-first parallel, with farther northward extensions along the Scioto, Wabash, Illinois, Mississippi and Missouri river valleys. The innumerable factors that may determine the ultimate distribution of the disease are not yet known, but it may be assumed that many disease-free locations within the present known disease area will eventually be invaded, and perhaps a farther outward spread of the disease may also be anticipated.

**JOHN R. SCHULTZ, A. Soriano & Co., Manila, Philippines, writes:** "During the war I was interned by the Japanese, but managed to come through it all, with loss in health and all earthly belongings. But I have made up my mind to build up business again, knowing it will be a hard road to travel."

## NORTHERN-GROWN GLADIOLUS BULBS

We can ship bulbs after December 1 in the following varieties and sizes. All fine florist numbers.

	No. 1	No. 2	No. 3	No. 4	No. 5
Aladdin. Fine salmon .....	\$37.50	\$32.00	\$25.00	\$18.50	\$12.00
Blaze. Good scarlet .....	.....	32.50	26.00	20.00	13.00
Ethel Cave Cole. Light pink .....	45.00	.....	28.50	22.00	15.00
Gardenia. Cream-white .....	.....	30.00	25.00	18.50	12.00
Gold Eagle. Standard yellow .....	.....	.....	25.00	18.50	11.00
King Lear. Tall purple .....	40.00	32.50	25.00	18.50	12.50
Maid of Orleans. Standard white .....	.....	35.00	24.00	18.50	12.00
Margaret Fulton. Best salmon for florists	35.00	30.00	24.00	18.50	11.00
Picardy. Fine salmon-pink .....	40.00	35.00	27.50	20.00	13.00
Snow Princess. Fine tall white .....	40.00	35.00	27.00	20.00	13.00
Vagabond Prince. Tall brownish-smoky; does well from small bulbs .....	.....	37.00	32.00	26.00	20.00
					13.50

Priced per 1000

	No. 1	No. 2	No. 3	No. 4	No. 5
Mother Kadel. Fine clear yellow .....	\$ 9.00	\$ 8.00	\$ 7.00	\$ 6.00	\$ 5.50
White Gold. Huge creamy-white .....	12.00	10.00	8.50	6.50	5.00
Buckeye Bronze. Lovely orange bronze smoky .....	.....	.....	7.50	5.00	3.50
Margaret Beaton. Flashy white with scarlet blotch .....	7.00	6.00	4.50	3.50	2.50

Priced per 100

300 at 1000 price, 20 at 100 price. Write for prices on Bulblets. Ask for price of M. Fulton in 10,000 lots, stating size. Subject to stock on hand. Ask for our catalog.

**CUTLER & VENNARD NURSERY**  
Box 394-N Sioux City, Ia.

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A Merry Christmas  
To All of Our Friends  
In the Nursery Trade.

*Let's make it a genuine old-fashioned Christmas and a Happy New Year.*

**W. N. SCARFF'S SONS - New Carlisle, Ohio**

### LINING-OUT STOCK OUR SPECIALTY....

Shade Tree Whips . . . a timely finished product saving 2 to 4 yrs. growing effort . . . excellent variety.

A very complete line of ORNAMENTAL TREES, SHRUBS and EVERGREEN SHRUBS, including many scarce items.

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### EVERGREENS

Lining-out stock  
For fall 1946 and spring 1947.  
Write for list.

**SUNCREST EVERGREEN NURSERIES  
Johnstown, Pa.**

### ACER PLATANOIDES - Norway Maples

6 to 8 ft., trans., \$45.00 per 100. 6 to 8 ft., 1/2 to 1-in. cal. whips, \$75.00 per 100. 8 to 10 ft., 1/2 to 1-in. cal. well branched, \$10.00 per 10; \$85.00 per 100. 8 to 10 ft., 1 to 1 1/2-in. cal. well branched, \$12.50 per 10; \$100.00 per 100.

1 1/2 to 2-in. cal. (in the ground), \$1.50 each, plus 25¢ dug bare root. 1 1/2 to 2 1/2-in. cal. (in the ground), \$2.00 each, plus 25¢ dug bare root. 1 1/2 to 2-in. cal. (in the ground), \$2.25 each, plus 40¢ dug bare root.

**STATE ROAD NURSERY**  
State and Sprout Rd.  
Route 1, Media, Pa.

Refer to our ad on Liners and Finished Stock in the November 15 issue.

**PALLACK BROS. NURSERIES, INC.**  
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**EUROPEAN APPLE SAWFLY.**

The European apple sawfly, *Hoplospina testudinea*, appeared in destructive numbers in Connecticut apple orchards for the first time in 1944, according to an article by Philip Garman and J. F. Townsend in the annual report of the state entomologist. Damage to at least seven different varieties of apples was seen, including commercial varieties, such as Baldwin, McIntosh, Gravenstein and Cortland. Most severe damage was noted on early varieties, such as Williams, Red Bird and Gravenstein, with by far the worst on Red Bird.

Known to occur in western Europe, the apple sawfly was first discovered in America in 1939 on Long Island. Only one generation a year was found. The adults emerge early in spring, about the time of the pink bud stage, and begin to lay eggs shortly thereafter within the calyx cup of the apple blossoms between the base of the stamen and the pistil. The young larva hatches directly into the calyx cup. The first stage of the larva usually mines the surface of the young apple, leaving identifying scars. In the second stage, the larva changes to a brown color and bores directly into the fruit, exuding a mass of brick-red excrement. One larva may tunnel as many as six apples. The larvae leave the apples during June for pupation in the ground, many at the time of the June drop. They are said to penetrate the soil little more than an inch.

Owing to the habits of the apple sawfly, control measures must be applied early in the season if satisfactory reduction of injury is to be had. English literature emphasizes the use of nicotine combined with fungicides and spreaders and also mentions the use of lead arsenate. Larval control measures should be directed against the newly hatched larva from the time it leaves the egg until the first molt, when it begins to penetrate more deeply into the apple. Dusts to kill or repel adult sawflies apparently have been used with some success, and insecticides applied to the fruit at the time of migration of the larvae from one apple to another have caused some of the larvae to drop to the ground. According to reports, they are then unable to crawl back up to resume feeding. Observations made in Connecticut showed that well sprayed trees in the vicinity of heavily infested ones developed no serious infections. The worst infections were found in orchards where one or more of the early sprays were neglected.

The apple sawfly may easily become injurious enough to cause considerable annoyance to orchardists, but because

**ROSES****They Are Moving Fast  
Roses Are None Too Plentiful****Order Now**

We offer subject to prior sale, 2-year field-grown ROSES budded on *Japonica Multiflora* understocks.

**SHIPMENTS** start after December 15. We can ship when you want them after that date.

Less than 100 lots, No. 1, 55c; No. 1½, 45c; No. 2, 35c  
100 lots and over, No. 1, 50c; No. 1½, 40c; No. 2, 30c

**TERMS**—Cash with order; no packing charges. Will accept 50 per cent cash with order. Balance C.O.D. plus packing charges. **NOTE**—Order in multiples of ten; we do not break bundles.

Ami Quinard	Etoile de Hollande	President Hoover
Antoine Revoire	Editor McFarland	Red Radiance
Betty Uprichard	E. G. Hill	Senior
Caledonia	J. L. Mock	Syracuse
Druschki, Red	Luxembourg	Talisman, yellow

**CLIMBERS**

Climbing Briarcliff  
Climbing Columbia  
Climbing Mrs. P. S. duPont

Dr. Van Fleet  
Paul's Scarlet Climber

GROWN RIGHT—GRADED RIGHT—PACKED RIGHT

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**The Homestead Nurseries**

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QUALITY STOCK ONLY.

CONIFERS  
PEONIES  
SHRUBS  
PHLOX  
AZALEAS  
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**Holland - Grown  
Nursery Stock**

Shrubs and Trees,  
including liners.  
Rhododendrons and Azaleas  
Hardy Perennials  
Peonies

NOVELTIES IN ALL LINES.  
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Growers and exporters since 1903.

**GULDEMOND & CO.**

(Boskoop, Holland)

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Rosebushes and Herbaceous plants  
Buy from a firm specializing in  
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**PEPINIERES VANVERT FRERES & FILS**

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Ask for quotations on items you  
need, indicating quantities.

**CANADIAN HEMLOCKS**

No loss when you get them in the bands they  
grow in; just set them out as they are.  
2 to 18 ins., in 2 to 3-inch bands.  
Now booking 1947 orders.

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**The lovely****Yellow****Rose****V for Victory****and other****SUB-ZERO HYBRID TEAS**

Large and beautiful as any.  
Easy to grow and long to live.  
Save replacement expense.  
Also Yellow and Orange Climbers.

*Write for trade prices to***BROWNELL ROSES**

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**WRITE US ABOUT-**

- Evergreen Liners
- Shade Trees
- Specimen Evergreens
- Flowering Shrubs
- General Assortment of Stock.

**SHERMAN NURSERY CO.**

Charles City, Iowa

**SPECIMEN SHADE TREES**

Low prices on car and truck loads. We can also supply many leading varieties of Shrubs, Evergreens, Fruits and Roses. Send us your want list at once.

**I. E. ILGENFRITZ' SONS CO.**  
Monroe, Mich.**QUERCUS****ROBUR FASTIGIATA**  
(English Pyramidal Oak)

1½ to 3½-in. cal., B&B  
\$15.00 to \$50.00 each  
F.O.B. Cincinnati

**WYOMING NURSERIES**C. E. Kern  
Cincinnati 15, Ohio

**LINING-OUT EVERGREENS**  
and AZALEAS  
Sturdy Plants.

**DUNLAP NURSERIES**  
Knoxville 16, Tenn.

it has only one generation a year and because the larvae are easily killed by various insecticides, control should not be too difficult. The fact that a single larva destroys more than one apple makes it a pest of importance, and the reports of rather large percentages of fruit destroyed in a single year make it appear serious. On the other hand, earlier-blooming varieties are said to be more heavily infested than others, and the period of blooming activity of the adult sawflies seems rather short compared with that of other insect pests of apples. So it appears that special emphasis will have to be placed on the pink, calyx and first cover sprays, and if the insect becomes more prevalent, it may be necessary to consider the regular addition of such materials as nicotine sulphate or derris to these sprays.

**WHAT PROGRESS ON  
"LIVING MEMORIALS"?**

Over two years ago, in the summer of 1944, the Washington office of the American Association of Nurserymen prepared an excellent booklet entitled, "Living Memorials." Many nurserymen bought copies of this booklet and distributed them in their various localities.

During the intervening months our attention and energies have been engaged by so many plans and problems that the living memorial movement shows signs of being neglected.

With the war's end now behind us, it may be more opportune at this time than it was earlier to promote interest in this project.

There will be eventually some type of war memorial in almost every community. Nurserymen should be leaders in the movement to see that such projects are living memorials.

A report from any nurseryman who has taken part in such a project in his own locality would be helpful and much appreciated by his fellow nurserymen. The American Nurseryman will be glad to publish news or actual plans of any living memorial now in plan or actual building, in addition to the few already reported. Such a clearinghouse of ideas might add momentum to this worth-while movement.

L. L.

THE Ed Snyder Nursery, Atlantic, Ia., recently purchased by Mr. and Mrs. Melvin Pellett, has been leased to Henry Field Seed & Nursery Co., Shenandoah, Ia. The Field company will take possession January 1 and will use the building on the grounds as a distribution point.

**JUNIPER SPECIMENS****JUNIPERUS COMMUNIS**  
(English Juniper)

	Each
2 to 3 ft., B&B,	\$1.25
3 to 4 ft., B&B,	1.75
4 to 5 ft., B&B,	2.50
6 to 8 ft., B&B,	4.50
8 to 10 ft., B&B,	6.00

**JUNIPERUS COMMUNIS ASH-FORDI** (Ashford Juniper)

18 to 24 ins., B&B,	1.00
2 to 3 ft., B&B,	1.25
3 to 4 ft., B&B,	1.75
6 to 8 ft., B&B,	4.50

**JUNIPERUS COMMUNIS HIBERNICA FASTIGIATA**  
(Irish Juniper)

18 to 24 ins., B&B,	1.00
2 to 3 ft., B&B,	1.25

**JUNIPERUS COMMUNIS SUECICA** (Swedish Juniper)

2 to 3 ft., B&B,	1.25
3 to 4 ft., B&B,	1.75

**JUNIPERUS KIYONOI**

(Kiyonoi Juniper)	3.50
5 to 6 ft., B&B,	5.00
8 to 10 ft., B&B,	6.00

Graded to a high uniform standard, properly dug and handled. Carloads, 10 per cent discount; less carloads, packing is charged at cost. Terms: Cash.

**HOGANSVILLE NURSERIES**

Hogansville, Ga.

**VERHALEN NURSERY COMPANY**

SCOTTSVILLE, TEXAS

Wholesale Growers

**ORNAMENTALS TREES SHRUBS EVERGREENS**

Wholesale growers of a general assortment for the best landscape plantings.

**BRYANT'S NURSERIES**

Princeton, Illinois

**60,000 TAXUS**

Pots, transplants and rooted cuttings.  
2500 J. Pfitzeriana  
2 to 3 ft. and 3 to 4 ft.  
To trucks F.O.B. our nurseries.

**HUMPHREYS LANDSCAPE SERVICE**  
Mt. Sterling, Ky.**WANTED**

Magnolia Acuminata,  
grafting grade.  
European White Birch,  
18 to 24-in. liners.

**FIKE NURSERIES**

Hopkinsville, Ky.

# Modern Quarantine Problems

The enlightened attitude of today toward quarantine problems was presented by Frank McKennon, of the Oregon department of agriculture, at the recent meeting of the American Association of Economic Entomologists, at Riverside, Cal.

Harking back to the first interstate plant quarantine conference, which was held at Riverside in 1919, he referred to the lack of uniformity in quarantines relating to specific plant pests and diseases, which resulted in confusion and irritation among officials, growers, shippers and transportation agencies. Citing the alfalfa weevil quarantine as an example, he mentioned the narrow and illogical attitude reflected in the statements in those earlier days. In time the quarantine problem was solved, and the weevil, so long desperately feared, proved not to be the ruin of the alfalfa industry anywhere.

"Many of the other pests which have been viewed with extreme alarm and have been subjects of elaborate quarantine restrictions," he said, "have become established without serious disruption of an industry, or we have learned that our ecological conditions are not favorable and they have either not established themselves or are of no economic importance."

"The few instances mentioned, and many more that could be cited," he declared, "indicate that some of our quarantine problems are more a matter of the thinking of quarantine officials, whatever the motivation of that kind of thinking, than they are of the inherent menace of the pests involved."

"Sometimes it seems necessary to take quarantine action with regard to some new pest or disease which appears to have bad potentialities before sufficient knowledge of its life history, habits and controls is available upon which to base sound regulations. Any such pest of sufficient importance to warrant hasty regulation should receive immediate attention from qualified research workers, and restrictions should be revised or revoked as quickly as facts are developed upon which to formulate such changes. My motto would be 'Go slow,' for a quarantine or regulation once established is much harder to revoke than to put into effect."

"In my opinion, the most that can be expected of a domestic quarantine, unless eradication of an infestation at its source is possible and practicable, is to delay spread somewhat.

The success of the delaying action depends upon many factors, such as the area of infestation, the degree of isolation, the host range, the volume of movement of host materials from the infested area and the habits and life history of the pest.

"Modern transportation has added immeasurably to the problems of quarantine regulation. When quarantines were first used by the western states for plant protection purposes, our geographic position was depended upon very largely to assist in achieving the purposes of such regulations. With high mountains, deserts and range areas on the east and south, with cold temperatures on the north and the Pacific ocean on the west, we felt reasonably safe in our isolation. The situation today is entirely different. With our high-speed highways carrying a tremendous traffic, with stepped-up railroad schedules and, above all, with huge planes carrying passengers and commodities across oceans and continents in a few hours, our isolation is only a dream.

"We cannot stop the wings of progress if we would. The new quarantine problems posed by this era of

speed in the movement of commerce must be solved in a way that will not retard it, or we must adopt a new concept of plant protection.

"Who is ready to step forward with the solutions of the many vexing and serious problems? I doubt if any one man has the correct answers or that, if he had, they would be accepted by the majority. There are too many political, industrial, personal and other factors involved to hope for unanimity. Perhaps something can be worked out by evolution through trial and error, or perhaps we may find that many of the problems are insoluble by quarantine methods. Personally, I am inclined to the latter thought.

"How, then, is plant protection to

## CAMELLIAS, AZALEAS and GARDENIAS

Wholesale quantities, lots.

**AZALEAS**, standard varieties such as Fisher's Pink, Pride of Mobile, Pride of Dorking, Elegans: Each Bare roots 4-in. pots.  
6 to 10 inches..... \$0.30 \$0.50  
10 to 15 inches..... .50 .75

**CAMELLIAS** (Japanicas), such as Chandleri, Elegans, Monarch, Cameo Pink, Pink Perfection:  
10 to 18 inches..... .90 1.25  
18 to 24 inches..... 1.25 1.60

**RARE CAMELLIAS**, such as Debutante, Purple Dawn, Giga-tea, Kumasaka variegated:  
8 to 12 inches..... 1.50 2.00  
12 to 18 inches..... 2.25 2.75

**EXTREMELY RARE**, Magnoliaeflora, Lindsay Neill:

8 to 12 inches..... 4.75 5.50  
12 to 18 inches..... 7.00 7.75

**GARDENIAS**, Hadley's improved:  
10 to 18 inches..... .50 .75

Check with orders.

**NATIONAL NURSERIES**  
West Beach, Box 99 Biloxi, Miss.

200,000 **Cushion Chrysanthemums**, No. 1, rooted divisions. Also, 3 to 5-eye Peony Divisions.

**Amur River North Privet Hedge**.  
**No. 1 Wilder (Currant) Plants**.  
**No. 1 New Logan (Black Raspberry) Plants**.

**No. 1 Peach Seedlings**.  
**Strawberry Plants**.

Write for Wholesale List.

**O. K. NURSERY**  
R.R. 2 Buchanan, Mich.

## LAKE'S SHENANDOAH NURSERIES Shenandoah, Iowa

Wholesale growers of  
a fine assortment of

### GENERAL NURSERY STOCK

Your inquiries will be appreciated.

### VIBURNUM BURKWOODI

New—Fragrant—Hardy  
Pinkish-white flowers in May  
Heavy pot-grown stock for lining out. Spring 1947 delivery.

Per 100 Per 1000  
2½-in. pots ..... \$35.00 \$300.00  
F.O.B. Dayton, Ohio.

No charge for packing if check  
accompanies order.

Write for new trade list.

### THE SIEBENTHALER COMPANY Dayton 5, Ohio

### TSUGA CAROLINIANA

(Carolina hemlock). Carolina hemlock, for lining out; branched trees, excellent roots, 8 to 12 ins., \$65.00 per 1000, packing included. Orders booked for early Spring delivery in 1000 lots only.

THE SKIPANO NURSERY CO.,  
Warren, Pa.

## NORTHERN-GROWN EVERGREENS

*Juniperus Virginiana Hilli*, 3½ to 4 ft.

*Juniperus Virginiana Hilli*, 4 to 5 ft.

*Juniperus Pfitzeriana*, 2 to 2½ ft.

*Juniperus Pfitzeriana*, 2½ to 3 ft.

*Mugho Pine*, 15 to 18 ins.

*Mugho Pine*, 18 to 24 ins.

*Black Hills Spruce*, 18 to 24 ins.

*Black Hills Spruce*, 24 to 30 ins.

*Taxus Cuspidata*, 18 to 24 ins.

*Taxus Cuspidata*, 24 to 30 ins.

Also a general line of northern-grown evergreens.

Visitors Welcome!

BROWN DEER NURSERIES

Operated by

HOLTON & HUNKEL CO.

P. O. Box 1747

Milwaukee, Wis.

**PIN OAKS** in all sizes up to 5-inch caliper.

**SPECIMEN CEDARS** up to 10 feet in height.

**AUSTRIAN** and **WESTERN YELLOW PINES** in 6 to 8 and 8 to 10-foot grades.

General assortment of **Shrubs** in heavy 3 to 4 and 4 to 5-foot grades.

**PRairie GARDENS NURSERY CO.**  
McPherson, Kan.

1887

1946

**WE OFFER  
FOR 1946**  
*our usual line of*

**SHRUBS EVERGREENS  
FOREST AND SHADE TREES  
VINES AND CREEPERS**

Trade List mailed on request.

**FOREST NURSERY CO., INC.**  
J. R. Boyd, Pres. McMinnville, Tenn.



**EVERGREENS**

Growers of Quality Evergreens  
Lining-out Stock a Specialty  
Write for Trade List

**EVERGREEN NURSERY CO.**  
Established 1884 : STURGEON BAY, WIS.

*Book orders early.*

**SPECIMEN EVERGREENS**

**SNEED NURSERY COMPANY**

P. O. Box 700 Oklahoma City, Okla.

**BURTON'S**

HEADQUARTERS FOR  
EVERGREEN GRAFTS, TRANSPLANTED  
EVERGREENS, SHRUB LINERS.  
RARE ITEMS YOU DO NOT FIND IN MOST LISTS! Write!  
**HILLTOP NURSERIES**  
EASTTOWN, OHIO

be achieved and each of our states be saved from the horde of insects and diseases which are waiting to invade us? We have all heard the cry of 'Wolf! Wolf!' so many times that we can feel justified in being skeptical of disaster. We do not wish to minimize the serious results both in crop losses and the continuing costs of control following the introduction of dangerous new pests. We simply want to take a realistic view of the limitations of quarantine protection under modern conditions.

"Research in control materials and methods is bringing to light new insecticides and new techniques in both the pest and disease fields which show great promise. Such research should be continued and accelerated, as should the study of life histories, habits and ecology of all pests which appear to be of economic importance either nationally or locally. Systematic surveys should be part of a continuing program, so that pests may be discovered in their incipient stages and prompt action may be taken leading to their control before serious economic damage results.

"Every precaution should be taken to prevent the introduction of new pests from foreign countries, and to this end ample funds should be appropriated by Congress to provide adequate inspection facilities and personnel to check all imported material which might carry such pests. The foreign plant quarantine act should be strengthened by giving the federal bureau of entomology and plant quarantine authority to limit importations to the amount which can be adequately inspected and to hold imported material under postentry quarantine when necessary to determine whether it is infested or infected.

"Provision should be made for scientists to study life histories, ecology and biologic and artificial controls of pests in their native lands when there is reason to believe they might be a menace to agriculture here if they should be introduced in spite of our best precautions.

"These things, we believe, will greatly assist in solving the plant protection problems not only in the western states, but in the entire nation."

G. HALE HARRISON, general manager of Harrison Bros. Nurseries, Berlin, Md., left December 6 by automobile for a vacation at Miami Beach, Fla., with his wife and their 16-month-old daughter. He will spend a month with one of his brothers, Orlando Harrison, who has the Croton hotel there.



Growers of a complete line of deciduous and coniferous species.

**JEWELL NURSERIES, INC.**

Lake City, Minn.

**Northern-grown Stock**

**Send  
for  
Price  
List.**

**J. V. BAILEY NURSERIES**  
St. Paul 6, Minn.

**SURPLUS BOSTON IVY**

Per 100

3-yr., 2 to 3 feet . . . . . \$35.00

2-yr., 18 to 24 inches . . . . . 30.00

2-yr., 12 to 18 inches . . . . . 20.00

**ONARGA NURSERY CO., INC.**  
Onarga, Ill.



Wholesale growers of the best  
Ornamental Evergreens,  
Deciduous Trees,  
Shrubs and Roses.

Write for our current trade list.

**THE KALLAY BROTHERS CO.**  
Painesville, Ohio

**BUXUS SEMP. WELLERI**

(Weller's Hardy Northern Type)  
Only Boxwood proved hardy in North-  
ern States for Twenty Years.

Ask for our Perennial catalog.

**WELLER NURSERIES CO., Inc.**  
Leading Perennial Growers  
Holland, Mich.

**C. M. Hobbs & Sons, Inc.**  
BRIDGEPORT INDIANA

Established 1875

FRUIT TREES  
GINKGO  
NORWAY MAPLE  
SOFT MAPLE  
SWEET GUM  
THURLOW WILLOW  
WELL GROWN EVERGREENS, in variety.

RED LAKE CURRANTS  
RED RASPBERRIES  
Hansen's BUSH CHERRY  
PARADISE ASPARAGUS

•  
**ANDREWS NURSERY CO.**  
FARIBAULT, MINN.

**MACDONALD RHUBARB**

Strong Divisions  
\$25.00 per 100.  
\$200.00 per 1000.

**WILLIS NURSERY COMPANY**  
Progressive Nurserymen  
Ottawa, Kan.

**GRAPEVINES, CURRANTS,  
GOOSEBERRIES and  
BERRY PLANTS**

Can also supply Currant lineouts and cuttings.

Known to the Wholesale Trade  
for Small Fruit Plants of Superior  
Quality Since 1890.

**F. E. SCHIFFERLI & SON NURSERIES**  
Fredonia, N. Y.

**We wish to purchase...**

Evergreens, Fruit Trees,  
Shrubs, etc.

Send your surplus list to

THE PONTIAC NURSERY CO., Romeo, Mich.

**NURSERY REMODELED.**

California, one of the leading states in the development of modern retail facilities for the nursery trade, is the site of the newly remodeled Capital Nursery Co., Sacramento. Three thousand plants were presented to visitors at the open house held November 15 to mark the completion of the firm's remodeling and building program.

The expanded business occupies an 11-acre site, with new display gardens having a 300-foot frontage on Freeport boulevard. The front entrance, which is an octagonal structure, from which paths radiate, has been beautified through the use of Arizona sandstone. Improvements include 45,000 square feet of lath house, a garden supply shop of 1,400 square feet, a greenhouse of 1,000 square feet, an office building and a parking area of 15,000 square feet. An unusual feature is the paging system, which will be used during rush hours to call customers when salesmen are available.

The Capital Nursery Co. was founded in 1936 by the late C. R. Armstrong. It is now owned by his sons, Charles G. and Eugene R. Armstrong.

**MODERN OREGON NURSERY.**

Pioneering in the development of convenient retail facilities in the northwest, Carlton Nursery Co., Forest Grove, Ore., is one of the few nurseries in this region with a 5-acre sales and display grounds establishment, including a large, hard-surfaced parking area, rest rooms, a complete nursery sales yard and undercover displays of trees and plants. A bus to and from Portland every thirty minutes brings customers to its doors, which are open seven days a week, from 8 to 5, and in the evenings, under floodlights, by appointment. Other facilities designed to aid its nation-wide retail and mail-order trade include daily rail and auto freight service and express and mail service several times a day.

Established by J. S. Brooks at Carlton, Ore., in 1890, the firm did business under the name of J. S. Brooks & Sons Nursery until 1911, when the name was changed to Carlton Nursery Co., and A. D. and Frank Brooks, sons of J. S. Brooks, took over the management of the firm. G. K. McDaniel, a son-in-law of A. D. Brooks, became affiliated with it in 1921. On the retirement of A. D. and Frank Brooks in 1925, the company was incorporated under the direction of Mr. McDaniel and

**EVERGREEN SEEDLINGS**

	Per 1000
<i>Ilex Opaca,</i>	\$15.00
4 to 6 ins.	25.00
6 to 12 ins.	40.00
12 to 18 ins.	15.00
<i>Kalmia Latifolia,</i>	25.00
4 to 6 ins.	15.00
6 to 12 ins.	25.00
<i>Tsuga Canadensis. Hemlock.</i>	15.00
6 to 12 ins.	25.00

**TREE SEEDLINGS**

	Per 1000
<i>Cercis Canadensis.</i>	15.00
6 to 12 ins.	25.00
12 to 18 ins.	10.00
<i>Liriodendron Tulipifera. Tulip Tree.</i>	15.00
12 to 18 ins.	20.00
18 to 24 ins.	30.00
2 to 3 ft.	15.00
<i>Sugar Maple.</i>	20.00
6 to 12 ins.	30.00
12 to 18 ins.	25.00
18 to 24 ins.	35.00

**NOLERIDGE NURSERIES**  
P. O. Box 26 McMinnville, Tenn.

**QUALITY ROSEBUSHES**

2-yr. Budded Stock

Good standard and patented varieties. Individual packing for counter trade if desired. Bundles of ten or carloads.

Write for our wholesale price list.

**M. OLIVER FLOWER FARMS**  
Box 86 Tyler, Texas

**FRUIT TREES  
AND  
SMALL FRUITS**

**HARRISON BROTHERS NURSERIES**

G. Hale Harrison, General Manager  
BERLIN, MARYLAND

**CHARLES SIZEMORE**

Traffic Manager

319½ Georgia St., Louisiana, Mo.

Loss and damage claims against railroad and express companies collected.

Freight bills audited.

Past due notes and accounts collected.

Well known to the nurserymen of the country.

Reference: Bank of Louisiana.

Grapevines, Currant Roots,  
Currant Cuttings and Berry Plants.

Small Fruit Specialists.

**WEST HILL NURSERIES**

Fredonia, N. Y. Since 1875

## A NEW APPLE

The Frostproof Patent No. 722 means a crop every year regardless of the frost. It blooms in Virginia the 18th of May, after the danger of frost is well past and it ripens in the fall along with the Winesap. If interested in raising and selling this apple tree, correspond with

**MAX NURSERY**  
Mineral, Va.

## PEACH STILL AVAILABLE

We still have a few thousand Peach in Elberta, Red Haven, Hale Haven, J. H. Hale, Ea. Elberta, Ea. Hiley and Golden Jubilee. A few thousand One-year Apple. Write for our wholesale list.

### GROW CONTRACTS

We are still accepting contracts for 1947 delivery: June-budded Peach, Plum, Apricots, Combination Peach, Plum, Apricot and Apple, also One-year Peach, Plum and Apricots, for 1948 delivery.

**J. C. SISK NURSERY CO.**  
Winchester, Tenn.

## 1946 • SPRING • 1947

Send us your want list.

**Apple, Peach, Plum, Apricot, Grapes, June-bud Peach.**

**Shade Trees and Ornamentals.**

**Commercial Nursery Co.**  
DECHEIRD, TENN.

I-yr. Concord and Niagara  
Grapes

I-yr. Peach  
Shade Trees  
Flowering Crab  
White Dogwood  
Purple Plum

**WILLOWBEND NURSERY**  
Davis Road Perry, O.

the eldest sons of A. D. Brooks, Lyle A. and A. Lynn Brooks, who are both still with the business. A third present owner, Wayne H. Melott, became affiliated with the company in 1935, upon the retirement of Mr. McDaniel.

Growing fields for the company were moved from Carlton to the more fertile Tualatin valley, at Gaston, in 1926. The present nursery fields were established in the Gales Creek valley near Forest Grove in 1935. In cooperation with the war effort to save man-hours, the nursery office and packing sheds were moved to the present location at Forest Grove during the summer of 1942.

Although the greater part of trees and plants grown by the nursery are sold and shipped to orchardists and homeowners on the Pacific coast and in the western states, shipments have been made to midwestern and eastern states, Hawaii, Canada, Mexico, South America, Africa, England and other foreign countries. A 40-page catalog in full color is being issued this season.

### TRI-COUNTY MEETINGS.

The fifty-third meeting of the Tri-County chapter of the California Association of Nurserymen was held November 15, at the Pierpont Inn, Ventura.

Immediately after dinner, the business meeting was called to order by President C. Mavro Warren. The reasons for changing the date of the November meeting from the fourth to the third Friday were discussed; however, no definite agreement was reached as to the effect of the switch.

After some discussion, it was decided that all members of the Tri-County chapter should be advised of the merits of the nurserymen's group compensation insurance, and the secretary was instructed to mail letters to the members advising them of the correct procedure in securing this insurance.

Bert Kallman gave an interesting report on the meeting of the steering committee which was held recently at Los Angeles.

It was agreed that the next meeting of the Tri-County chapter would be held at Santa Barbara, December 13, in the form of a Christmas party, with a turkey dinner and program. President Warren appointed a committee consisting of Bert Kallman, Jack Hume, the secretary and the president to work out the details.

Applications for membership were approved as follows: Associate member, Mrs. W. B. Howes, California

## Real Deal

### GRAPES

Heavy, two-year,

No. 1 CARMAN GRAPES.

Price:	10	100	1000
2-yr. No. 1	17c	15c	12c
1-yr. No. 1	13c	10c	8c

### FIGS—FIGS

#### TEXAS EVERBEARING

and MAGNOLIA

1 to 2 ft.,	15c	2 to 3 ft.,	20c
3 to 4 ft.,	35c	4 to 5 ft.,	40c

Pure-Strain ELBERTA

Low-price PEACH

Send Your Want List To:

## WOLFE NURSERY

Wholesale Dept.

Stephenville, Texas

## GRAPEVINES

Golden Muscat, 2-yr. No. 1

**\$40.00 per 100**

**\$350.00 per 1000**

**J. E. MILLER NURSERIES**  
Canandaigua, N. Y.

## GRAPE ROOTS

Grown on gravel land.  
(There are none better.)

Catawba, Delaware, Worden,  
Niagara, Caco, Brighton, Fredonia,  
Agawam, Moore's Early, Concord  
and Ontario.

Send us your list of wants for  
immediate quotations.

**CHAMPION NURSERIES**  
Perry, O.

## RHUBARB

Sorry, we are all sold out on Rhubarb  
roots for this season. Will have 200,000  
each MacDonald and Chipman's Canada  
Root to contract for next season.

**BASS NURSERY**  
Chadron, Neb.

**25,000**

Peach trees in leading varieties.

**20,000**

1 and 2-year-old Apple in leading varieties.



A general line of Shade Trees, Evergreens and Shrubs. We are still booking orders for Apple and Pear grafts for Spring shipment.

**EGYPTIAN**  
**Nursery and Landscape Co.**

Farine, Ill. Phone 64

**COLLECTED BERRY PLANTS  
AND VINES**

	Per 100		Per 1000
<b>Blackberry.</b>			
12 to 24 ins.....	\$3.00	\$25.00	
Heavy plants .....	4.00	35.00	
<b>Rubus Occidentalis.</b>			
<b>Blackcap Raspberry.</b>			
Light plants .....	2.50	20.00	
Heavy plants .....	3.50	30.00	
<b>Rubus Trivialis. Dewberry.</b>			
Light plants .....	2.50	20.00	
Heavy plants .....	3.50	30.00	
<b>Vinca Minor Common</b>			
<b>Periwinkle.</b>			
Small, lining-out .....	1.00	8.00	
Heavy, lining-out .....	1.25	10.00	
Clumps, 3 to 5 stems... .	3.50	30.00	
<b>Lonicera Japonica Halliana.</b>			
<b>Hall's Honeysuckle.</b>			
6 to 12 ins. liners.....	.75	7.00	
12 to 18 ins. liners.....	1.25	10.00	
12 to 18 ins. branched... .	3.00	25.00	

Cash with order; packing free.

**HIGHWAY GARDENS**  
 Route 3 McMinnville, Tenn.
**RED RHUBARB**

Per 100

MacDONALD .....	\$20.00
CANADA RED .....	40.00

40,000 true-to-name No. 1 divisions. Let us quote on your requirements.

**KEELER'S GARDENS**  
 Sioux Falls, So. Dak.
**STRAWBERRY PLANTS**

All Leading Varieties.

Let me ship **STRAWBERRY PLANTS** direct to your customers. Write for details.

**ANNA STRAWBERRY NURSERY**  
 F. G. Anderson, Prop.  
 Anna, Ill.

Polytechnic College, San Luis Obispo, and regular member, Leslie H. Murphy, Steelman's Nursery, Camarillo.

President Warren stressed the importance of bringing all dues up to date and urged all members who have not already done so to forward their checks to the state secretary immediately.

At the October meeting, held at Santa Barbara, Jack Hume was officially appointed chairman of the housing committee for the Santa Barbara meetings and instructed to take care of the meeting place and program for these meetings. Walter Knecht was appointed chairman of the housing committee for the Ventura meetings, and President Warren was appointed chairman of the program committee.

L. T. Clearwater, Sec'y.

**CALIFORNIA NOTES.**

The Capital Nursery Co., Sacramento, held a gala opening recently. The occasion celebrated the opening of the company's additional salesyard, salesroom and service department adjoining the old location. It was attended by the public, members of the trade and city officials, who granted the opening much local publicity and praise. Charles Armstrong, recently elected president of the California Association of Nurserymen, is a member of the firm.

Dr. Vernon T. Stoutemyer has been appointed head of the department of ornamental horticulture at the University of California at Los Angeles. His professional experience includes research in plant propagation, nursery problems and turf culture. He was formerly associated with the bureau of plant industry, United States Department of Agriculture, Glenn Dale, Md.

I. A. Sayed, associate horticulturist for the government of Bombay, India, has been visiting several nurserymen in the state, studying California citrus varieties and methods of propagation and culture.

The 10,000 Christmas trees cut from the Deschutes National Forest are carrying short notes to conservationists. They read, "This tree brings Christmas cheer from the great outdoors. Its cutting was not destructive, but gave room for the neighboring trees to grow faster."

Bay area landscape architects have formed a committee within the state association to consider local problems of the profession.

The San Francisco park commission has called for bids for the furnishing and planting of acacia trees

**NURSERYMEN**

Buy your 2-yr. **APPLE** now.  
 5 per cent discount for cash with order, or 25 per cent down and balance C.O.D. Per 100

5 to 6 ft., well branched. \$40.00

4 to 5 ft., well branched. 30.00

3 to 4 ft., mostly branched 22.00

2 to 3 ft., mostly branched 18.00

Varieties: **Yellow Del., Red Del., Grimes, King David, Black Twig, Stayman, Trans., Maiden Blush and Ada Red.** Write for prices on all other kinds of nursery stock.

Per 100

**PEACH**, 18 to 24 ins. . . . . \$12.50**ROLLERS WHOLESALE NURSERY**

Rogers, Ark.

**WE OFFER...**

Our General Line of

**SMALL FRUIT PLANTS**

Let us quote on your requirements.

**L. J. RAMBO'S WHOLESALE NURSERIES**

Bridgman, Michigan

**STRAWBERRY PLANTS**

Large supply of strong Iowa-grown plants. Prompt service.

**EVERBEARING VARIETIES.** Per 1000

Streamliner ..... \$25.00

Brunes Marvel ..... 15.00

Gem ..... 12.00

Evermore (Minn. 1166) ..... 16.00

Gomzata ..... 25.00

**STANDARD VARIETIES.**

Robinson, Dunlap and Blakemore. 8.00

**DOLLAR NURSERY**, Bloomfield, Ia.**CABBAGE PLANTS**

Outdoor-grown • Frostproof Varieties  
 Early Jersey, Charleston Wakefield, Flat Dutch, Gloria Enkhuizen and Copenhagen Market.

2000 plants for \$3.00; express collect.

**ONION PLANTS**

Crystal Wax, Yellow Bermuda, Yellow or White Sweet Spanish.  
 6000 plants for \$4.75; express collect.

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 Box 195 Omaha, Texas

**APPLE SCIONS**

Let us have your want list. We have a good supply of leading varieties.

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 Golden Eagle, Ill.

## AZALEA TRIUMPH

Most beautiful of all Indica Belgium types; fully double, deep cyclamen-red flowers, often 3 inches across. Petals daintily twisted. Best forcing type. Real money-maker.

2-inch Pots  
Per 100 \$20.00 Per 1000 \$175.00  
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### MYROBALAN SEED LOVELL PEACH PITS

*Nation's Leading Source*  
Write today for quotations.



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**A. B. C.**  
**"Supreme" Quality**  
**SEEDS — PLANTS — BULBS**  
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Growers' Accessories

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### SEEDS

Collectors of Tree, Shrub and Wild Flower Seeds  
Crude Drugs and Ornamentals  
E. C. MORAN Stanford, Mont.



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BROADWAY RUBBER MFG CO. LOUISVILLE 2, KY.

in several uptown areas, and \$25,000 has been appropriated for this initial planting. Most local comment regarding this has been of unfavorable nature, the gist of the criticisms being that the trees are outstandingly attractive for only a short while and much of the time are "dirty trees," because of continual shedding of leaves, bark and seeds.

Each month additional members of the state association are placing their employees' compensation insurance with the state department of insurance through the state nurserymen's association offices. The savings amount to about twenty per cent of the premiums and are more than equal to the cost of membership in the association.

Citricola scale, which is commonly found in citrus groves and on stock in nurseries, was worse in 1946 than ever before. It can be effectively controlled with DDT plus a sulphur dust.

About a quarter of a million Oriental fruit moth parasites were released in Kern county orchards and nurseries in September. These parasites are produced by the state at the citrus experiment station, Riverside, and are apparently the only effective method of control of the pest.

More than 500 acres of grapes already have been planted this fall in San Diego county. Grape growing is a comparatively new type of farming in that area.

Jack Lincke, executive secretary of the California Association of Nurserymen, has sent every member a mat of the seal of the association with the request that he use it on stationery and business cards and in advertising. It is part of the plan to publicize the association and to establish the group in the minds of the buying public. It will tie in with any advertising done by the group.

Collar rot on deciduous trees in orchards and nurseries can be reduced or prevented entirely by curtailing late irrigation, according to Sheldon J. Jackson, assistant Merced county agent. In most parts of the state, Mr. Jackson indicates, trees irrigated just before harvest will need no further irrigation this year. He also advocates pulling the soil from around trees during the winter months.

The forecast is that citrus production will more than double in the next twenty years, because of greatly increased plantings in the past few years. There is no immediate market in sight for this increased production to replace lend lease and military requirements during the war. It is recommended, therefore, that growers

STRAWBERRIES		Per 1000
Gem Everbearing		\$20.00
Progressive Everbearing		12.00
Banner		10.00
Blakemore		9.00
Klondike		9.00

ASPARAGUS		
M. Washington		13.00
Paradise		15.00

BOYSENBERRIES		Per 100
Thorny		\$ 6.50
Thornless		10.00

YOUNGBERRIES		Per 100, \$6.50
Gem, completely thornless		10.00

DEWBERRIES		
Gem, completely thornless		10.00

BLACKBERRIES		
Cory Thornless		8.00
Cameron (Victory)		10.00
Crandall		7.50

RASPBERRIES		
Cuthbert		6.50
Cumberland Blackcaps		7.50
Munger Blackcaps		7.50

CURRANTS		
Perfection, 2-yr.		25.00

The above stock is ready for immediate shipment.

### POMONA NURSERY

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### SMALL FRUITS AND BERRY PLANTS

Can still supply most varieties of Berry plants. Let us know your needs, will make you a quotation.

Will take contracts to grow Raspberry plants for coming year.

Send for samples of our plants.  
Let us place your firm's name on our mailing list.

**CALAPOOIA BERRY FARM & NURSERY**  
Shedd, Oregon

### DEL RANCHO FORTUNA

### FRUIT TREES and GRAPEVINES

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McFARLAND, CAL.

### NOTICE

Limited production makes it impossible to book orders for new customers.

**HOWARD ROSE COMPANY**  
Hemet, California

take steps to improve conditions by better marketing, by lowering retail prices, by expanding volume of fruit processed, thus stimulating off-season consumption, and by enlarging by-product uses, further stimulating consumption and lowering costs.

Several civic groups in the state have taken up the plan initiated by Clarence F. Pratt, of San Francisco, to plant the highways leading into their communities with evergreen trees, redwood if practical.

The California Association of Nurserymen will sponsor an exhibit at the state fair to be held at Sacramento in August, 1947. This is the first time the group as a unit will be represented at the fair. W. B. B.

#### HEADS HOLLY GROUP.

P. E. Lewis, of the Wilamette Holly Orchard, Tigard, Ore., newly elected president of the Oregon Holly Growers' Association, is a school-teacher turned grower. Mr. Lewis is a native of Wilmington, N. Y., where he was born in 1878. After high school graduation he taught in country schools for several years, followed by eight years in the real-estate and insurance business at Lake Placid, N. Y.

In 1911 Mr. Lewis and his wife responded to the call of the west and went to Tigard, where they have since lived. Mr. Lewis established his first holly orchard in 1927, since when he has devoted his time to experiments in holly growing, specializing in *Ilex aquifolium*, or English holly, and all its species.

Owner of the Wilamette Holly Orchard, he is active as a civic leader, having served as president of various



P. E. Lewis.

## APPLE and PEAR SEEDLINGS CHINESE ELM SEEDLINGS

As specialists in this line, with 30 years' experience, we know how to grow, grade and pack right. This, coupled with fine volcanic soil, which develops a splendid root system; proper cultivation, and moisture under control, so we can mature stock properly, enables us to furnish a superior product.

## WASHINGTON NURSERIES

Toppenish, Wash.

**THE SEASON'S GREETINGS**  
and  
all good wishes for the coming year.

RICH & SONS NURSERY

Hillsboro, Ore.

Route 4

church, educational and fraternal groups. He is a member of the Tigard Methodist church, Portland Industrial Arts Association, A. F. and A. M. and the Lions' Club.

#### ALMOND FOLIAGE INJURY.

Bordeaux mixture and other copper fungicides sometimes injure almond foliage within a few weeks after the post-blossom (leaf-cover) spray is applied. This injury is manifested as dark brown to almost black necrotic areas on the tips and along the margins of the distal half of the leaf. Brown to reddish flecks also develop over other areas of the leaf blade. Some yellowing and dropping of leaves may occur.

A type of Bordeaux injury, in which extensive scorching of the leaf blade does not occur, may develop two months or more after the post-blossom spray, reports E. E. Wilson, of the University of California, in the Plant Disease Reporter. Leaves will lose their green color, become yellow and fall during or shortly after a period of high temperatures. Most frequently a few of the older leaves only are involved, and consequently defoliation is not severe. In one orchard, however, defoliation became so severe in 1946 as to cause considerable shriveling of the nuts. This orchard, located on relatively shallow soil of low water-holding capacity, was not irrigated in early summer. By mid-June the leaves of non-sprayed trees would wilt slightly in midday, but recover during the

## PACIFIC COAST NURSERY

2244 N. Skidmore Ct.  
Portland 11, Ore.

Pioneer seedling growers on the Pacific Coast since 1914.

Specializing in fruit tree seedlings. Angers Rooted Quince Cuttings, Chinese Elm Seedlings, Norway Maple Seedlings and English Privet.

We also have Norway Maples, 3-yr. branched, and Norway Whips and E. W. Birch, 3 yrs. old, well branched.

We aim to please with quality stock.

John Holmason & Sons, Props.

## NURSERY PACKING

Wood Feathers (Baled Red Cedar Shavings) are valuable to use when packing bare roots or deciduous stock for shipment because of their large moisture absorbing capacity. Will keep roots moist in transit or storage. The most economical of packing materials and the easiest to use.

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P.O. Box 37, North Portland, Ore.

## BALED SHINGLE TOW (CEDAR SHAVINGS)

WM. A. JOHNSTON  
408 Postal Bldg., Portland 4, Ore.

night. Leaves on sprayed trees, on the other hand, wilted much more severely, and many of the older leaves became yellow and fell. Upon application of water to the soil the foliage of such trees promptly regained a turgid condition, and the yellowing and dropping of leaves was checked. Sprayed trees located in orchards that received an early-summer irrigation bore no recognizable signs of this type of injury. None of the scorching type of injury was observed in 1946.

Trees of the Ne Plus Ultra variety suffered most from the yellow-leaf type of injury, but Nonpareil and Drake trees were also affected. Ne Plus Ultra also appears to be the variety most subject to the scorching type of injury.

NEW greenhouses and lath houses are being built by Holm's Nursery, Salinas, Cal.

THE L & R Nursery, 418 North First avenue, Arcadia, Cal., recently opened for business, is operated by Lewis St. Thomas and Raymond Hugg.

EIGHT acres, now in general nursery stock, have been purchased by Moller's Nursery, Fairview, Ore., on which to build a new warehouse and retail salesyard when materials are available.

F. A. DOERFLER, of F. A. Doerfler & Sons, Salem, Ore., president of the Oregon Association of Nurserymen, was elected state representative from Marion county at the November 5 election.

PERENNIAL gardens and a nursery will be developed by Bill Clark, of Clark's Flower Shop, Corvallis, Ore., on a 5-acre tract west of Walnut Grove, Ore. Retail facilities include a 40x60 lath house, a parking lot and an office.

STANLEY SALES CO., manufacturing and distributing a complete line of garden tools, hose and accessories, has been established by Stanley Weiss, formerly proprietor of the Victory Boulevard Nursery, Burbank, Cal. He will feature a personalized service to assist his customers in locating items which are difficult to find.

POSTWAR reorganization of McAlister Tree Service, Great Falls, Mont., includes the addition of a nursery and landscape service. The firm was organized in 1937 and has been in operation, giving complete tree care, since then with the exception of time spent by the owner, Robert R. McAlister, in the army.

# PORTLAND WHOLESALE NURSERY CO.

306 S. E. 12th AVENUE Avery H. Steinmetz PORTLAND, OREGON

## Quality Stock

CONIFERS AND BROAD-LEAVED EVERGREENS  
SHADE AND FLOWERING TREES  
FRUIT TREE SEEDLINGS  
FRUIT TREES  
DECIDUOUS SHRUBS  
VINES AND BULBS  
PORTLAND ROSES

*Write for our Catalog*

To The Nursery Trade  
We Extend  
Very Best Wishes  
for a  
Merry Christmas  
and a  
Happy New Year

## A. MCGILL & SON

FAIRVIEW, OREGON

*Wholesale Only*

## GOOD WESTERN-GROWN NURSERY STOCK

Fruit Tree Seedlings  
Flowering Ornamental Trees  
Shade Trees

Grown right and packed right.

Combination carloads to Eastern distributing points will save you on freight.

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6691 S. W. Capitol Highway

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**Wholesale Growers  
of  
General Nursery Stocks**

We still have quite a number of Camellias, Rhododendrons, Specimen Boxwood, Nandinas and Green Aucubas. Will try and fill your needs on other stock in smaller quantities.

## F. A. DOERFLER & SONS

150 N. Lancaster Dr. Salem, Ore.  
Phone: 21175 Salem

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MILTON - Since 1878 - OREGON

Flowering, Ornamental and Shade Trees

Oregon and Washington-grown Fruit Tree Seedlings

	Per 1000
No. 1, 2/16 to 3/16-in., branched	\$25.00
No. 1, 3/16 to 4/16-in., branched	25.00
No. 2, 2/16 to 2/16-in., branched	18.00
No. 2, 2/16 to 3/16-in., straight	18.00
No. 3, about 2/16-in. ....	12.00
No. 3, 3/16 to 6/16-in., liners	18.00
No. 2, 2/16 to 3/16-in., liners	14.00

	Per 1000
1/4-in. and up, branched	32.00
1/4-in. and up, straight	28.00
No. 1, 3/16 to 4/16-in., branched	25.00
No. 2, 2/16 to 3/16-in., straight	25.00
No. 2, 2/16 to 2/16-in., branched	20.00
No. 2, 2/16 to 2/16-in., straight	18.00
No. 3, about 2/16-in. ....	14.00

Our Combination Carloads to Eastern distributing points assure minimum transportation cost.

Use your letterhead for correspondence.



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EVERGREENS - Propagators & Growers  
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**AS ALWAYS—  
OREGON'S BEST SOURCE  
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Limited crops reserved for established customers.

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## CLASSIFIED ADS

Five lines, \$1.00,  
each additional line 20 cents,  
per insertion.

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PIXWELL GOOSEBERRIES AND NEW-BURGH, RUDDY, LATHAM AND CHIEF RASPBERRIES. All Raspberries No. 1, heavy, \$50.00 per 1000. Pixwell Gooseberries, 2-yr., heavy, 40¢ each by the 100 or 1000. New Minn. 1118 Strawberry, now named Arrowhead, \$50.00 per 1000. 10 per cent discount for cash. The Pixwell Gooseberry, originated by Dr. Yaeger, of the North Dakota experimental station, is on the recommended fruit list of Minnesota and the Dakotas and will soon be the leading variety. According to the North Dakota station bulletin, Pixwell beans 50 per cent more than Carrie, and the berries are about twice as large. We found this true in our tests; we tested all the leading varieties and found Pixwell the best of all. The bush is fast-growing, extremely hardy; berries of super quality, sweet, easy to pick, can be eaten out of the hand, hang on long stems and stay on bushes until fall. Blossoms and berries will stand 18 degrees Fahr. frost in late May and bear 100 per cent crop. Such a frost will practically kill nearly all other fruits.

SCHWAB FRUIT FARM & NURSERY  
220 N. Fifth St. Mankato, Minn.

STRAWBERRY PLANTS. CERTIFIED—  
3,000,000 Blakemore (yellow-resistant), Aroma, Klondike, Tenn. Supreme, Gem, Evermore and New Streamliner. Grown on new land. Write for prices for spring delivery.  
ROMINES PLANT FARM, Dayton, Tenn.

### BULBS

GENUINE IMPORTED HOLLAND BULBS. One of America's best list of the finest varieties and Novelties. All top-size bulbs. Ready for immediate shipment. Send for our free catalog, beautifully illustrated in color, with wholesale discounts.

TULIPS, HYACINTHS, NARCISSUS, CROCUS, LILIES and many other species of miscellaneous bulbs. All reasonably priced.

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CARROLL GARDENS, Westminster, Md.

IMPORTED BULBS, prepared for forcing. Hyacinths, L'Innocence and Pink Pearl. Tulips, Golden Harvest, Early Queen, Pink and Scarlet Wonder. Very large bulbs.

Per 100 Per 1000  
Hyacinths ..... \$12.50 \$115.00  
Tulips ..... 6.25 57.50

WHEELOCK WILSON NURSERY  
Marshalltown, Ia.

WHOLESALE PRICES OF CANNA BULBS.  
\$6.00 per 100, \$50.00 per 1000

Hungarian, tall, pink; Wyoming, yellow; King Humbert, red; Yellow King Humbert, yellow; President, red; Pennsylvania, orange and red.

BENTON COUNTY NURSERY CO.  
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TULIPS—All the best and latest novelties in many varieties. Top-size bulbs, 12 cm. and up. Ideal Darwin, Darwin, New Giant Breeder, Cottage, Single Early, Double Early, Multi-flowered, Rembrandt American Flag, Lily-flowered, Triumph, Parrot, Chameleon, Chinese Lantern and botanical.

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200,000 GLADIOLUS YELLOW EMPEROR.  
Nos. 1, 2 and 3. High crowned, never been cut. Will sell right for fall delivery.

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215 W. Washington St. Suffolk, Va.

1946 CROP GLADIOLI  
Nos. 1 2 3  
Mixed (Choice) ..... \$25.00 \$22.00 \$20.00  
C. J. DUNN Benton Harbor, Mich.

### EVERGREENS

RED AND WHITE PINE—\$8.00 to 10.00 Red and White Pine Trees, 2 to 4 feet in height. Buyer to select and remove from present location at Easton, Conn. Reasonably priced for early removal and sales in volume. Inquire J. R. ECKART, R. F. D. 4, Madison Ave., Bridgeport, Conn.

Norway Spruce, 2 to 3 ft., \$1.25; 3 to 4 ft., \$1.50, and 4 to 6 ft., \$1.75, B. & B. F.O.B. on your truck, or you may select and dig your own at reasonable prices. Cut trees after December 10.

CARL CARTER, Roseville, O.

### LINING-OUT STOCK

Available Spring 1947.

	Per 1000
White Pine, 2-1, 4 to 6 ins.	\$4.00
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White Pine, 2-3, 10 to 12 ins.	140.00
Norway Red Pine, 2-0, 4 to 6 ins.	25.00
Norway Red Pine, 2-1, 5 to 8 ins.	40.00
Norway Red Pine, 2-2, 6 to 12 ins.	75.00
Western Yellow Pine, 2-0, 4 to 6 ins.	35.00
Western Yellow Pine, 2-1, 5 to 10 ins.	95.00
White Spruce, 2-1, 4 to 6 ins.	70.00
White Spruce, 2-2, 6 to 12 ins.	100.00
Black Spruce, 2-1, 3 to 7 ins.	45.00
Black Spruce, 2-2, 8 to 12 ins.	80.00
Black Hills Spruce, 2-3, 6 to 10 ins.	30.00
Black Hills Spruce, 2-3, 10 to 14 ins.	120.00
Black Hills Spruce, 2-3, 14 to 18 ins.	140.00
Engelmann's Spruce, 2-2, 4 to 7 ins.	75.00
Balsam Fir, 2-0, 3 to 4 ins.	30.00
Balsam Fir, 2-2, 8 to 10 ins.	110.00
Lined-out Stock.	

Each Per 100

Mugho Pine, XX, 8 to 10 ins. \$0.60

Mugho Pine, XX, 10 to 12 ins. .90

Colorado Blue Spruce, XX, .

12 to 15 ins. 2.00

18 to 24 ins. 3.00

Colorado Green Spruce, XX, .

18 to 24 ins. 2.00

White Spruce, XX, 12 to 18 ins. .85

White Spruce, XX, 18 to 24 ins. 1.10

White Spruce, XX, 24 to 30 ins. 2.50

Black Hills Spruce, XX, .

12 to 18 ins. .85

18 to 24 ins. 1.50

Platte River Juniper, XX, .

12 to 18 ins. .90

18 to 24 ins. 1.35

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Common Juniper, XX, .

8 to 10 ins. .85

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18 to 24 ins. .70

Hemlock, XX, 10 to 14 ins. .55

### FOR IMMEDIATE OR SPRING DELIVERY

#### Select Clean Stock

Japanese Spreading Yew.

12 to 15 ins. B.B. .2.00

16 to 18 ins. B.B. .2.50

24 to 30 ins. B.B. .3.50

Clipped Yew, Globe.

15 to 18 ins. B.B. .3.00

18 to 24 ins. B.B. .3.75

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24 to 30 ins. B.B. .2.50

30 to 36 ins. B.B. .4.50

Norway Spruce.

3 to 4 ft. B.B. .1.00

4 to 5 ft. B.B. .1.50

Also Pyramid Arborvitae, Mugho Pine and Colorado Blue Spruce.

Ask For Prices

NIAGARA HORTICULTURAL PRODUCTS

St. Catharines, Ont., Can.

### CAMELLIA LINERS.

One-year, bed-grown plants with good root system. These are 8 to 10 inches, to be shipped bare root, immediate delivery, \$30.00 per 100.

Variegated, Glore des Anglais, Prof. Sargent, Mine, de Strelakoff, Nobilissima, Lyon McKinsey, Harlequin, Lorraine, Reine des Fleurs, Lily, Duchesse de Rohan, Lady Alice, Miss Dora McCarter, Imperator, Beall Rosea, Empress of India, Abby Wilder, Dainty, Bolena 106, Madam Kuritz, His Majesty and Rev. John Bennett (old type).

Also one lot unlabeled mixed Camellia liners, 6 to 8 ins. \$25.00 per 100. Mixed Sasanquas, 8 to 12 ins. \$25.00 per 100.

Please do not order less than 10 of any one variety. Terms: one-fourth down, balance on delivery.

FAIRCHILD CAMELLIA GARDEN

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### SCIONS AND CUTTINGS.

Davida Involutacea . . . . . 50c

Cedrus Libani, hardy . . . . . 25c

Taxus Cuspidata . . . . . 3c

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Picea Bicolor . . . . . 25c

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Picea Excelsa Procumbens . . . . . 5c

Abies Nordmanniana . . . . . 7c

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Not less than 50 of a kind; cash, please.

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245 Brimfield Rd. Wethersfield, Conn.

BUXUS HARLANDI (Harland Boxwood).

Fine bushy plants, nice color. Per 100

2 1/2-inch pots . . . . . \$35.00

4-inch pots . . . . . 60.00

BUXUS JAPONICA. Good color, shapely.

2 1/2-inch pots . . . . . 30.00

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5 per cent discount for cash with order; no packing charge.

GLEN SAINT MARY NURSERIES CO.

Glen Saint Mary, Fla.

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Colorado Blue Spruce, Norway Spruce, Nikko Fir, Austrian Pine and Scotch Pine, from 3 to 10 ft. Sold on personal inspection only.

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Showy, clean, crimson-red, nonfading flower. Large, glossy, dark green foliage. Excellent forcer. A cross between Hinodegiri and Amoena and harder than Hinodegiri. Ask for color photo. For shipment commencing Dec. 15, ride cigar train 2 1/4-in. pots, \$25.00 per 100; limit 250. Cash with order.

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### AZALEA ROOTED CUTTINGS

100,000 Formosa and some other Indian varieties available for shipment after December 1. \$6.50 per 100; \$60.00 per 1000. No charge for packing. FLORIDA NURSERY & LANDSCAPE CO. P. O. Box 97, Leesburg, Fla.

Get our prices on FOREST-GROWN LINERS before you buy.

BABER'S PLANT FARM

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### FRUIT TREES

#### DORMANT PEACH AND PLUM TREES

Approximately 2000 in all.

#### PEACH

Each

Varieties: Elberta only. 5/16 to 7/16-in. 2 to 3 ft. .40. 7/16 to 9/16-in. 3 to 4 ft. .33. 9/16 to 11/16-in. 4 to 5 ft. .47. 11/16 to 1-in. 5 ft. up (supply limited) .68

PLUM 10¢ higher per tree.

Varieties: La Crescent, Yellow and Green Gage. No. 11/16-in. left in the above plums. A few 11/16-in. and under in Burbank. Each

1000 Forsythia Viridisima, 2-yr. .30. 3 to 4 ft. .40.

1000 Catalpa Western, 1-yr. sides. .03. 500 Black Walnut, 1-yr. sides. .04

500 Rooted Cuttings of White Begonia .09

500 Rooted Cuttings of Geranium .09

Rose Pink .10

5000 Concord Grapes, 1-yr. No. 1. .08

Apple Grafts contracted for Spring delivery or Washington seedlings, all standard varieties. Let us do this time-consuming job. \$3.50 per 100. Please write your needs. All stock guaranteed first-class. Cash with order earns free boxing. Will break bundles to suit your needs. Prices F.O.B. Licking, Mo., and subject to change without notice.

SUPERIOR NURSERY, Licking, Mo.

### REAL DEAL GRAPES

Heavy 2-yr. No. 1 Carman grapes.

Price: 2-yr. No. 1. 10 100 1000  
17c 15c 12c  
1-yr. No. 1. 13c 10c 8c

### FIGS

Texas Everbearing and Magnolia

1 to 2 ft., 15c; 2 to 3 ft., 20c; 3 to 4 ft., 35c;

4 to 5 ft., 40c.

Pure-strain Elberta, low-price Peach.

Send your want list to

WOLFE NURSERY

Wholesale Dept.

Stephenville, Texas

### PEACHES FOR THE SOUTH.

Jewel, Angel, Waldorf.

Exceptionally heavy, well branched trees. Ready to bear quickly. Begin shipping in December.

Per 100  
4 to 5 ft. .90. 5 to 7 ft. 110.00

5 per cent discount for cash with order; no packing charge.

GLEN SAINT MARY NURSERIES CO.

Glen Saint Mary, Fla.

### HARDY PLANTS

#### PEONIES.

Per 10 Per 100 Per 1000

Alexandre Dumas . . . . . \$3.00 \$27.00 \$250.00

Baronee Schroeder . . . . . 7.50 60.00 500.00

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Delicatissima (Fl. Tr.) . . . . . 3.00 27.00 250.00

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Sarah Bernhardt . . . . . 6.00 55.00 500.00

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Queen Victoria . . . . . 3.00 27.00 250.00

Peonies according to color:

White and Pink . . . . . 3.00 25.00 230.00

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PHIL LUTZ PEONY FARMS.

Bonnieville, Ind.

### PRIMULA POLYANTHA.

Western Rainbow Giants. Seedlings sold out until November.

1 X plants, \$12.50 per 100; will bloom heavily in spring. Seeds, Trade pkt., \$1. 1/4 oz. \$2. 1/2 oz. Also seeds, pulverulent, dentilata, florindae, auricula. Trade pkt., \$1.

WESTERN HORTICULTURAL SUPPLY

3629 S. E. 67th Ave., Portland 6, Ore.

## PEONIES.

Good cut flower varieties, 3 to 5 eyes.  
65 per cent red, 25 per cent pink, 10 per cent white.

\$20.00 per 100.

Sold by colors only.

SUNSET NURSERIES, Sioux City, Ia.

## BLEEDING HEARTS

DICENTRA SPECTABILIS, 3 to 6 eyes,  
\$10.00 per 100. DICENTRA EXIMIA, 3 to 6 eyes, \$20.00 per 100. Cash with order.

J. HENDRIKS, Grower, Portage, Mich.

## ROOTS

VICTORIA RHUBARB ROOTS.

Per 100 Per 1000  
1 to 1½-in. cal. .... \$6.50 \$50.00  
½ to 1-in. cal. .... 4.00 35.00  
½ to ¾-in. cal. .... 2.50 20.00  
Freshly dug; immediate shipment.

C. D. WRIGHT  
Hamburg, Ia.

## VICTORIA AND LINNAEUS RHUBARB

ROOTS for immediate delivery.  
1½ to 2-in., \$4.00 per 1000; 1 to 1½-in., \$25.00 per 1000; ¾ to 1-in., \$20.00 per 1000;  
½ to ¾-in., \$15.00 per 1000; ¼ to ½-in., \$7.50 per 1000. Boxing extra. Get your supply now. ASHCRAFTS PLANT NURSERY, Copemish, Mich.

## ASPARAGUS ROOTS.

Washington asparagus, 1-yr. light grade, \$5.00 per 1000. Immediate shipment. No order less than 500 plants.

C. D. WRIGHT, Hamburg, Ia.

## SEEDS

## SEEDS.

Cornus Amomum, ca. \$1.25 per lb.; Prunus Serotina, ca. \$1.10; Prunus Virginiana, ca. \$1.10; Lonicera Morrowii, ca. \$5.00; Bur Oak acorns, 25c; White Oak, 25c; Prickly Ash, \$3.00; Ohio Buckeye, 35c; Rhus Glabra, db. 10c; Rosa Blanda hips, 75c; Viburnum Lentago, ca. \$1.75 per lb.

BILL SMITH, SEEDSMAN,  
404 Blunt St., Charles City, Iowa

## CALIFORNIA PEACH SEEDS

California Lovell Peach Pits from 1946 crop. Well cared for in drying. In bags of about 80 lbs. Each \$3.00 per bushel. In lots of ten and up, \$2.50 per bushel. F.O.B. Rogers, Ark.

## BENTON COUNTY NURSERY CO., INC.

Rogers, Ark.

PEACH PITTS, Southern-collected, high germination \$3.00 bu.; Peach seedlings for budding or grafting \$25.00 per 1000, \$2.00 per 100. Boxwoods, Shrubs, Fruit trees. Cash with order. RIVERDALE NURSERIES, Riverdale, Ga.

BERBERIS DARWINI. Evergreen. Hardy north to New Jersey and to British Columbia on west coast. New crop seeds. D. B. Trade packet, 50c; ¼ lb., \$1.50; pound, \$4.50.

## WESTERN HORTICULTURAL SUPPLY

3629 S. E. 67th Ave., Portland 6, Ore.

## SHRUBS and TREES

## HARDWOOD CUTTINGS.

We offer the following varieties for delivery after December 15. We cut to 6½ inches, using well hardened wood from our own cutting blocks. Tied in hundreds.

Per 1000

Cornus sibirica	\$6.00
Cornus lutea	5.00
Cornus paniculata	5.00
Cornus amomum	5.00
Elder, Cut-leaf	5.00
Forsythia intermedia	4.00
Forsythia intermedia spectabilis	4.00
*Forsythia, Dwarf	4.00
Lonicera tatarica rosea	5.00
Lonicera bella rosea	4.00
Lonicera bella sibida	4.00
Lonicera morrowi	4.00
Lonicera maackii	4.00
*Lonicera sabell	6.00
Hydrangea A.G.	6.00
Hydrangea P.G.	5.00
Lilac rothomagensis	5.00
Philadelphia, Bouquet Blanc	4.00
Philadelphia grandiflora	4.00
*Philadelphia virginiana	7.00
Physocarpus opulifolius aureus	4.00
Physocarpus opulifolius nanus	5.00
Privet, Amur North	4.00
Privet, Iboia	3.00
Privet, Regel's true (hardy strain)	4.00
Privet, Lodenae	6.00
Sorbaria sorbifolia	4.00
Spiraea alpine, pine	4.00
Spiraea frutescens	4.00
Spiraea, Korean (trichocarpa)	4.00
Spiraea thunbergii	4.00
Spiraea vanhouttei	4.00
Symphoricarpos chenaultii	4.00
Viburnum dentatum	5.00
Poplar, Lombardy	5.00
Willow, Nioche Weeping	4.00
Willow, Pussy	5.00
Willow, Golden	4.00

\*Limited to 1,000 with other varieties.

Packed free. Cash with order, please.

THE SCOTCH GROVE NURSERY

Scotch Grove, Ia.

## ROSA MULTIFLORA JAPONICA

These are exceptionally husky, well rooted plants. You will appreciate the quality of this stock.

Per 1000

½-inch and up.....	\$49.00
½ to ¾-inch.....	33.00
No. 1, 3/16 to ½-inch.....	22.00
No. 2, 2/16 to 3/16-inch.....	20.00

Prices net; boxing and bailing at cost.

FORREST KEELING NURSERY,

Elisbury, Mo.

## PRIVET, CALIFORNIA—1-year

Heavily Branched, Strong Stock.

Per 1000

12 to 18 ins.....	\$40.00
18 to 24 ins.....	50.00
24 to 30 ins.....	60.00

Write for quotations on quantities. No shipping.

EVERGREENS ACRES

U. S. Route 13, McDonough, Del.

P. O. Middletown, Del.

## PIN OAK LINERS.

Select Quercus palustris seedlings, 9 to 12 ins., 2/16 to 3/16-in. caliper. \$25.00 per 1000, F.O.H. Elisbury, Mo.

FORREST KEELING NURSERY,

Elisbury, Mo.

## LIVE OAK (The Evergreen Oak)

6 to 12 ins., \$10.00 per 100.

12 to 24 ins., br. \$25.00 per 100.

All nursery-grown, F.O.B. here.

STOVAL NURSERY

Leakeville, Miss.

## ROSES

See our display ad on page 30.

OZARKS PLANT FARMS, INC.

Springfield, Mo.

## VINES

## AMPELOPSIS TRICUSPIDATA (Veitchi)

(Boston Ivy)

Available for Immediate Shipment.

2-yr., 18 to 24 inches.....	\$35.00
2-yr., 15 to 18 inches.....	30.00
2-yr., 12 to 15 inches.....	25.00

Per 1000

1-yr. Seedlings, No. 1..... \$50.00

C. R. BURR &amp; CO.

Manchester, Conn.

## MISCELLANEOUS

CONCORD GRAPE CUTTINGS, carefully made, tied with wire 100 to bundle, \$4.50 per 1000. Fredonia, \$6.00. Strong, 1-yr. Concord vines, \$7.00 per 100; \$65.00 per 1000. Extra-heavy rooted Boysenberry and Youngberry, \$40.00 per 1000; bearing size, \$60.00. Thornless Boysenberry or Youngberry, \$50.00 per 1000; bearing size, \$75.00. All F.O.B. here.

IDEAL FRUIT FARM, Stillwell, Okla.

Pachysandra terminalis, heavy rooted cutting, \$4.00 per 100; \$35.00 per 1000. Hardy Ivy Baileya, heavy rooted cuttings, \$4.00 per 100; \$35.00 per 1000.

Hardy French Hydrangeas, out of 2½-in. pots, \$10.00 per 100; \$90.00 per 1000. Out of 4-in. pots, heavy, 35c each.

EAST HILL NURSERIES

Chesterland, Ohio

## DECORATIVES

BOUGHES: Spruce and Balsam, \$4.00 per 100 lbs.; \$76.00 per ton. Hemlock and White Pine, \$3.75 per 100 lbs.; \$65.00 per ton.

SPRAYs, heavily laden with cones: Spruce, 18 to 24 ins., \$16.00 per 100; Hemlock, 18 to 24 ins., \$10.00 per 100. ROPING: White Pine, Laurel and Hemlock, 22c per yd. Lycopodium, 24c per yd. WREATHS, per doz. Spruce, Balsam, Hemlock and Laurel, 10 ins. \$4.50; 12 ins., \$5.40; 14 ins., \$6.00. LYCOPODIUM, 10 ins., \$5.10; 12 ins., \$5.70; 14 ins., \$6.20. Your choice of 4 sample 12-in. wreaths, \$2.00, postpaid.

MAPLEHORST FARM NURSERY  
Tel. Monticello 50413 Monticello, N. Y.

FINE CONES. Per 100

Lobolly Cones, 3 to 4½ ins..... \$2.00

\$16.00 per 1000.

Hard Cones, 1 to 2½ ins..... 2.00

White Pine Cones, 3½ to 6 ins..... 2.00

Hard or White Cones, \$16.00 per 1000.

Slash Cones, 4 to 6 ins..... 3.00

Longleaf Cones, 7 to 7½ ins., \$2.00 per bu.

Ambered Cones, \$3.00 per box.

Sample box of our cones, labeled, postpaid, \$2.00.

MARYLAND NURSERY, Edmonston, Md.

## SUPPLIES

## FINE SCREENED PEAT

Acid pH 4-6. Some Nitrogen.

Our Peat is excellent for Geraniums, Camellias, Azaleas and Hydrangeas, also for mixing with soil for potting, seed flats and mulching. Order early. Packed in 2-bu. bags, 5 to 24 bags, \$1.00 each; 25 to 49 bags, 95c each; 50 to 100 bags, 90c each. Bulk carload, about 60 yards or 600 bags, \$27.00 per car. We ship same day order received. Cash, please.

HAASE BROS.

116 S. Jefferson St. Peoria, Ill.

## GREEN DYED BAMBOO STAKES.

Special offer.

Fresh, new crop of imported stakes.

Quality excellent, pencil thickness.

Du Pont dye.

Size	Per 1000
18 ins.	\$4.10
24 ins.	5.40
30 ins.	6.90
36 ins.	8.30
48 ins.	10.75

2000 per bundle.

## BEST DOMESTIC CANE STAKES.

All dark green.

Check this list now and send your order.

## MEDIUM, HEAVY.

% to ¾-in. (500 to bale).

Per 1000
2 ft.
2½ ft.
3 ft.
3½ ft.
4 ft.
5 ft.

28.00

AMERICAN FLORIST SUPPLY CO.  
1335 W. Randolph St. Chicago 7, Ill.

## KNOCK-DOWN FLATS.

Made from a good grade of Southern Cypress, since Cypress is not available. Standard specifications inside measurements.

16x12x2½	\$16.25 per 100
16x14x3½	20.50 per 100
20x14x2½	20.00 per 100
20x14x3½	23.00 per 100
22½x16x2½	22.00 per 100
22½x16x3½	25.00 per 100

All other sizes quoted on request. Prices F.O.B. Birmingham.

We are manufacturers, not jobbers. Freight to any point is a small item per flat. Our flats are the best. Why pay more? Our quality guaranteed. Prompt shipment, any quantity. Attach check to order.

HIGHOWER BOX & TANK CO.  
Birmingham, Ala.

## BAMBOO CANE STAKES.

Special sizes supplied on request.

## DYED GREEN, pencil thickness.

Contents	Price
Per bale	Per 1000
1½ ft.	1000 \$5.00
2 ft.	1000 6.50
2½ ft.	1000 9.00
3 ft.	1000 10.25
3½ ft.	1000 12.50
4 ft.	1000 15.00

5 ft. 1000 18.75

NURSERYMEN'S EXCHANGE  
Howard St. San Francisco 7, Calif.

## IMPORTED CANE STAKES.

Check your needs and order now.

Size	Per 1000
18 ins.	\$2.60
18 ins.	4.10
24 ins.	5.40
30 ins.	6.90
36 ins.	8.30

2000 per bundle.

AMERICAN BULB CO.  
1335 W. Randolph St. Chicago 7, Ill.

## PROFIT WITH PERF-O-RAIN.

Rain when you want it—low pressure—rectangular strip watered—No overlap—No sprinkler heads or other gadgets—Portable lightweight pipe—Long life. Write for free folder. W. R. AMES COMPANY OF FLORIDA, 3906 E. Broadway, Tampa 5, Florida, or W. R. AMES COMPANY, 150 Hooper St., San Francisco 7, Calif.

## MAGIC ELECTRIC WELDER.

110-volt AC-DC; welds, brazes, solders, cuts all metals easy to tie, full direction. Complete with power unit, flame and metallic arc attachments, carbons, fluxes, rods, mask. Only \$19.95. Used by the Navy. Guaranteed one year. Splendid for nursery and farm use.

MAGIC WELDER MFG. CO.  
2414 Canal St., New York, N. Y.

## SOIL HEATING EQUIPMENT.

Designed by a grower and engineer, for commercial propagation. Cable, soil thermostat and pilot lamp to heat 20 sq. ft., \$11.40; 40 sq. ft., \$14.20; 60 sq. ft., \$17.00; 80 sq. ft., \$19.95, and 150 sq. ft., \$28.05. F.O.B. Seattle.

N. ROBERSON CO.  
Seattle 55, Wash.

## FLATS.

25x13½x1½ ins. inside measure. Bottoms and sides, ¼ in. thick. Ends, 1¼ ins. thick; metal banded. All white pine. Assembled. Bargain at 15c. F.O.B. Elgin.

RINEHIMER BROS.  
Elgin, Ill.

## PAPER FLOWER POTS.

red. 1000 2-in., 2600 2½-in., 1800 3-in., \$200 3½-in., 1000 4-in., \$75.00. Labeled: 1450 2-in., 1600 2½-in., 850 3-in., \$20.00. Not used, will exchange for evergreen liners.

THOMAS NURSERY, AFFTON, MO.

## PRINTING.

Letterheads, billheads, statements, cards, envelopes, tags, blotters, folders, catalogs, samples. Send copy for estimate.

J. GARLAND HILL, Dept. A, Seaford, Del.

"NAMSCO" Dutch-type Burlap Squares, soft, easy to tie. Save time, labor, twine. Write NEW AMSTERDAM IMPORT CO., INC., 122 Chambers St., New York 7, N. Y.

**SUPPLIES—Continued**

**SOIL HEATING CABLE** by "GRO-QUICK." Now shipping heavy duty cable. New soil temp. thermostat with pilot light, \$9.50. Bottom heat can't be beat for rooting cuttings for forcing. See advt. this issue. GRO-QUICK.

366 W. Huron St., Chicago 10, Ill.

**GIBRALTER** Frost Covers pay for themselves. Economical, long-lasting, ideal for windbreaks, 6 ft. wide; 50 ft. \$13.75; 100 ft. \$26.00; 150 ft. \$39.00. NEW AMSTERDAM IMPORT, 122 Chambers St., New York 7, N.Y.

**WANTED**

What have you to offer in Strawberry Plants, Grapevines, Raspberry Plants, Boysenberry Plants, lining-out stock Evergreens and Shrubs; fall and spring delivery; write us, Box 710.

E. W. TOWNSEND & SON NURSERIES  
Salisbury, Md.

**WANTED TO BUY.**

1000 Hemlock Seedlings, nursery-grown, not collected. \$60 Taxus cuspidata, lining-out size. \$50 Taxus cuspidata brevifolia, lining-out size.

STEELE'S NURSERIES, Palmyra, N.J.

**WANTED**

Chionanthus Virginicus Seedlings. 2-yr. preferred. Quote, giving number, size, age and price.

W. B. CLARKE & CO.  
P. O. Box 343 San Jose, Calif.

**WANTED**

1000 more or less Blue Damson Plum, 2 to 3 ft. and up. Also 10,000 or more, 2-yr. No. 1, Concord Grape.

DAVIS NURSERIES, Sumner, Wash.

**WANTED**

Would like Clematis plants or cuttings.

GULF GARDENS  
P. O. Box 493, Corpus Christi, Texas.

**CANKER STAIN CONTROL.**

Acting on the principle that publicity will arouse tree owners to protective measures in the control of plant diseases, the New Jersey state department of agriculture has issued a booklet describing the canker stain disease of plane trees and recommending simple measures which can stop the severe losses now being incurred in many plantings in that state. Circular No. 360, titled "The Canker Stain Disease of Plane Trees, with Recommendations for Controlling It in New Jersey," was prepared by Edgar G. Rex, supervisor of plant pest control at the New Jersey department of agriculture, Trenton, and James M. Walter, pathologist at the forest pathology field station, United States Department of Agriculture, Morristown, N. J. The text is in easy-to-read tabular form, and of the twenty-three pages, fourteen are clear, full-page illustrations.

The bulletin especially considers the two species of plane trees important in New Jersey, the London plane, *Platanus acerifolia*, and the American sycamore, *P. occidentalis*. Because infection is not known to take place through the unbroken bark, tree owners are advised to avoid and discourage the mutilation of plane trees, permitting only necessary pruning. The virus is readily transmitted by man, and it is well adapted for transfer from infected to healthy trees in pruning operations and by other mechanical means. Once having gained entrance to the

wood, the fungus spreads vertically and radially, advancing about three inches a year in the medullary rays. Upon reaching the pith the fungus is free to fan out along radial lines, which sometimes results in secondary cankers almost directly opposite the original points of infection.

Surgical efforts to save infected trees are not advisable except in the sense of pruning to remove branches from trees in which the fungus has not invaded the trunk, and all pruning equipment must be carefully disinfected to avoid inoculating the tree at other points. It has been found that plane trees are practically immune to inoculation with the canker stain fungus during the period from December 1 to February 15, which provides a safe period of pruning.

Many of the proprietary tree wound paints are not sufficiently antiseptic to kill or inhibit the growth of the fungus, and actually, it has been found that some of these paints serve as highly favorable carriers and protectors of the fungus. If the use of tree wound paint is deemed desirable, a gilsonite varnish fortified with phenyl mercury nitrate should be employed. However, the use of even such a fortified tree wound paint cannot be considered as a substitute for the sterilization of pruning tools and accessory equipment, and is recommended only as a noncarrier of the fungus.

**TREES FOR ST. LOUIS.**

Trees desirable for various situations in the area around St. Louis, Mo., are presented in an article titled "A Selection of Trees for St. Louis and Vicinity," by Robert B. Clark, appearing in the November Missouri Botanical Garden Bulletin. A selected list of 100 deciduous trees, with sizes, landscape effects and tolerances indicated, is presented in table form. Separate lists are given of trees for heavy clay soil, for dry situations and for poor soils; of shade-tolerant, wind-resistant and smoke-tolerant trees; of trees free from disease and insect pests; of trees that attract wild life, and of trees with attractive autumn foliage, with conspicuous flowers and with attractive fruits.

**RUTLAND BEARD**, Catonsville, Md., is planning a new range of greenhouses, the first of which is now being constructed.

**MICHAEL SIMONIELLO** is re-entering the nursery business under the firm name of Brentwood, at 2621 Atlantic avenue, Brooklyn, N. Y.

**WANT ADS**

Help and Situation Wanted and For Sale advertisements.

Display: \$2.50 per inch, each insertion.  
Lines: 20¢ line; Minimum order \$1.00.

**SITUATION WANTED** — Nurseryman, 38, married, experienced grower, salesman, landscaper, college graduate, desires permanent position with eastern retail nursery. Address Box 470, care of American Nurseryman.

**HELP WANTED****HELP WANTED**  
NURSERY FOREMAN

35 years or older. Should have at least 5 years experience in general nursery and landscape work.

SHILOH NURSERIES  
R. D. 1 York, Pa.

**WANTED**

Will invent \$5000.00 to \$10,000.00 and services in established garden shop or cash-and-carry nursery store with display ground. Now managing half-million dollar department store, Ohio, New York, Pennsylvania, Kentucky, Tennessee. Address Box 466, care of American Nurseryman.



Extends Transplanting

Season—Reduces Losses



The Dow Chemical Company  
Midland, Michigan



For Treating  
Cuttings  
and Seeds  
Bulbs and Tubers

Scientific Growth Stimulant

Write for Free Booklet

SCHUYLKILL CHEMICAL CO. 2348 Sedley Ave., Philadelphia 32, Pa.

**PRONOUNCING DICTIONARY**  
of Plant Names

64 pages, 3000 names, 25¢ per copy

American Nurseryman Chicago

### NOTES FROM A NURSERYMAN'S WIFE

One of the old garden magazines the head of the house collects (and his wife reads) gives us these bits of tree lore:

"An ancient writer informs us that trees and woods have twice saved the world; first, by the ark, then by the cross."

"Apollo and Mercury descended to earth and gave to mankind a hazel wand, which had the power of imparting a love of virtue and of reconciling hearts divided by hate or envy. By the use of this wand Mercury taught men to love home, country and peace and made commerce a bond between nations. Known as the caduceus, the hazel wand is still the emblem of peace, commerce and reconciliation." (Wonder how it became the emblem of the medical corps? Webster, by the way, says it was a wand of olivewood.)

"Plato had his code of laws engraved on cypress, as being more indestructible than brass, and the popes of the Middle Ages were buried in coffins made of this wood eternal."

"Among the Romans the oak was the emblem of power; the olive, of learning; the ash, of war, and the grape, of festivity. The Greeks regarded the laurel as symbolic of conquest; the cypress, of mourning, and the willow, of despondency."

\* \* \* \*

There is no more interesting horticultural history than that of the grape in America. For nearly 250 years attempts to establish European grapes were made. Lord Delaware, John Winthrop, William Penn and Thomas Jefferson did what they could, giving time, thought and financial support to the project. Land grants and cash subsidies were made by colonial, state and national governments.

Experienced grape growers, or "vine dressers," were brought from Europe, but everywhere there was dismal failure. Climatic conditions and diseases were too much. It was not until advances were made in botanical knowledge which led to hybridization and selective breeding of native species that anything like commercial grape growing could be accomplished in the eastern states. However, hundreds of years later, the Pacific coast was found to be ideally suited to the vinifera grapes which had so resolutely refused elsewhere to adapt themselves to the New World. (Even in California

## TROLLEY CHAIN HOIST

USED TO QUICKLY ADAPT ANY TRUCK FOR HEAVY

### LIFTING—HAULING—LOADING

#### IDEAL FOR LIFTING AND TRANSPLANTING TREES

Nurserymen everywhere have found these Spur Geared Trolley Chain Hoists (Wright or Yale) ideal for lifting and hauling even the largest trees. These hoists are 1½-ton capacity and were designed for use by the Army on 2½-ton 6x6 cargo trucks. One man can easily lift a large tree—haul it to a new location and place it accurately into position. This hoist can be used profitably and economically in your business, saving time and labor for you.



#### IMMEDIATE DELIVERY!

**B. M. K. SALES, INC.**

1718 State St., CHICAGO 16, ILL.  
PHONE: VICTORY 7900

LIST PRICE \$384.50

NOW! OVER  $\frac{1}{2}$  OFF \$184.50

Lots of 3 169.50

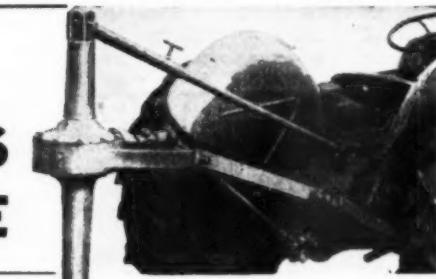
Order today! Satisfaction guaranteed! Each hoist is brand new and ready to use. There are no extras to buy. Immediate delivery! F.O.B. yards, Chicago, Ill.

## DIG 2 HOLES A MINUTE

WITH

A ROPER

Planting and transplanting time is cut way down when you use a Roper high-speed hole digger. Installed easily by one man in a few minutes. Safe, fast and efficient in all soil types. Adjustable so that holes may be dug straight down even on rolling land. Priced reasonably direct from manufacturer.



*Buy Direct*

ONLY \$125.00

\$126.50 with 18-in. blade.

F.O.B. Factory

(Available to fit Ford Tractors with Ferguson System only until further notice.)

ORDER NOW!

TWO-WEEK DELIVERY!

SEND FOR DETAILS!

**ROPER** MANUFACTURING CO., WALNUT DR., ZANESVILLE, OHIO

### "GRO-QUICK" ELECTRIC SEED BED HEATER

BOTTOM HEAT CAN'T BE BEAT  
For Early Plant Starting  
For High Germination  
For Fast Growth  
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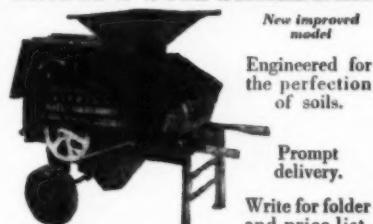
GET ALL THE FACTS NOW

Send today for free new instruction sheet with plans and experience reports from users in your line of business. GRO-QUICK will substantially increase your profits.

**"GRO-QUICK"** 388 W. Huron St.  
Chicago 16, Ill.

## LINDIG'S SOIL SHREDDER

New improved model



Engineered for the perfection of soils.

Prompt delivery.

Write for folder and price list.

1075 W. Larabee Ave.  
St. Paul 8, Minn.

Lindig's Mfg. Co.  
Special equipment built to your specifications.

**SPRA-SHIELD**

**PROTECT**

**Your Shrubs  
Bushes and Trees**

**from RAVAGING RODENTS  
and WINTER KILL**

- SPRA-SHIELD protects plants with a dense, hard, laminated coating, applied with a garden sprayer. Plants so protected are seldom molested by cotton-tail rabbits, mice, rats, shrews and other rodents. One application usually sufficient.
- SPRA-SHIELD increases plant resistance to winter-kill, sealing in moisture and reflecting unseasonable heat.
- SPRA-SHIELD is beyond comparison with make-shift resinous mixtures. It requires no special tools, no wrappers, no spring removal. It is ready-mixed, non-injurious, non-poisonous. Saves time, saves work, saves precious plants and trees.

*If local dealer cannot supply, order direct. Please include dealer's name and address.*

1 Qt., \$1.40      1 Gal., \$3.00  
5 Gal., \$12.50

Check with order. Express charges collect.

**SPRA-SHIELD CO.**  
436 FEDERAL SQUARE BUILDING  
GRAND RAPIDS 2, MICHIGAN

## Holiday Greetings

**CLOVERSET FLOWER FARM**

**Ernest Haysler & Son**  
105th and Broadway  
KANSAS CITY 5, MO.

**ARIENS-Tiller**



there were troubles, however. We once lived in a California town which had been originally a German settlement given over to the growing of grapes until a disease struck the roots. Known still as Anaheim disease, it led to the grubbing out of the grapevines and the growing of citrus fruit instead. Yes, this is the same Anaheim Jack Benny made famous—or notorious—with his "Anaheim, Azusa and Cucamonga.")

\* \* \* \*

We have an English friend who used to regale us with tales of grapevines in England. "Acres and acres they covered," he told us, "acres and acres." However, a scuppernong grapevine on Roanoke island, N. C., is claimed to be the largest in the world. It covers over an acre and was discovered in 1585, some say, although tradition has it that the colonists of Sir Walter Raleigh planted it.

\* \* \* \*

Elsa Conners, in Woman's Day magazine, says that geraniums, which are really not geraniums, but pelargoniums, can be followed around the world. They abound in Australia and in Africa. They are in the arctic and antarctic zones. They grow brilliantly in the Mediterranean region. They are familiar sights in western Asia. They are named after famous explorers, such as Magellan, and famous women, such as Lady Washington. They are among the world's best floral antiisolationists, and are what Californians grow hedges of for easterners to marvel over.

\* \* \* \*

A wanderer from Austria, we read, brought with him, as a memento of his native land, a packet of seeds of the forget-me-not from the banks of the beautiful blue Danube river. Settling at last in Wisconsin, he planted his seeds along the Little Manitowoc river, where now, for perhaps half a mile, the banks are bluer than the sky in summer.

\* \* \* \*

It probably irks most nurserymen to have all evergreens called "pines." Now we find that Longfellow, in translating the German folk song which begins "O tannenbaum, O tannenbaum" as "O hemlock tree, O hemlock tree," was a better poet than botanist. Tannenbaum is the German name of the fir tree, the abies family. There are no hemlocks indigenous to Europe. This information comes from the Hemlock Arboretum, at "Far Country," Pa.

\* \* \* \*

In reading about the Arnold Arboretum's wonderful library, begun

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by C. S. Sargent in 1873, we came across several surprising things. It was rather odd to learn, for instance, that the agricultural publications from Russia, central Europe and Asia are constantly increasing. In our unconscious arrogance we supposed all agricultural bulletins were peculiarly our own, and that elsewhere agricultural practices passed from father to son without benefit of printing press. We live and learn!

\* \* \* \*

Chemistry seems to be doing much for the plant industry. One of the latest discoveries we have noticed is that Dr. William H. Eyster, of Bucknell University, in Pennsylvania, sprayed the flowers of self-sterile petunias with a solution of alpha-naphthaleneacetamide and obtained good crops of seeds.

\* \* \* \*

A note from Amsterdam, Holland, says that Dr. W. E. de Mol, who has been experimenting with tulips for twenty years, makes his bulbs "drunk" with X-rays. The first year after treatment the bulbs are so "intoxicated" that they do not bloom at all, but after that burst out in "the most amazing colors."

\* \* \* \*

How do these experimenters get such ideas? Dr. Paul de Kruif and others have told us how medical discoveries came to be. Wouldn't it be interesting for a horticultural Paul to explore what lies behind these discoveries in the realm of plant life?

\* \* \* \*

Did you read in a recent Saturday Evening Post of the Dr. Adams, of Pennsylvania, who has developed seed pellets which he claims give ninety-eight per cent germination? These pellets contain seeds, soil, insect and rodent repellents, chemicals to prevent mildew and fertilizer. The pellets are planted, sometimes by airplane and sometimes by a special machine Dr. Adams has invented. Congress thought well enough of his system to appropriate \$175,000 with which to revegetate 50,000 acres of Arizona by this method, and the United States Department of Agriculture has recognized in it a possibility of stepping up the grain and truck garden crops of the country.

IN AN automobile accident recently, Charles R. Mouquin, of E. H. Mouquin, Inc., Glen Head, L. I., N. Y., secretary of the Long Island Nurserymen's Association, broke a leg in two places. He started to get about again at the beginning of this month.

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The Weather

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**DDT REMOVAL FROM APPLES.**

Although there is no question about the effectiveness of DDT against many insect pests, the danger that it may remain on fruits, vegetables and various other crops at the time of harvest, thus rendering them unsafe for consumption by human beings or animals, has proved a serious disadvantage to its use on such crops. Because of its insolubility in aqueous solutions, the removal of DDT from food products presents problems not encountered in the removal of residues of inorganic constituents of insecticides such as arsenic and lead. Moreover, the use of many organic solvents in concentrations high enough to dissolve DDT would be injurious to the food products or would impart undesirable flavors or odors to them.

As there is little information in horticultural literature on the removal of DDT from food products, an article entitled "Removal of DDT Spray Residues from Apples," appearing in the August issue of the Michigan agricultural experiment station quarterly bulletin, is helpful in the consideration of this problem. In experiments at the Michigan station DDT in the form of fifty per cent wettable powder and Grimes Golden apples, which had been in cold storage for several months, were used. Methods investigated for removing DDT from the fruit included rubbing or polishing with a dry cloth, peeling before and after polishing, brushing with a dry brush and washing with various agents.

Of these removal treatments, it was found that only peeling was effective in removing practically all of the DDT present. None could be detected on the flesh of the polished apples and only a trace on that of the fruit which had not been polished. Each of the other treatments removed some DDT, but if a large amount was present, none were effective in reducing it below the tolerance limit of seven milligrams per kilogram of fruit. Results were erratic, even with the same washing agent, and neither concentration nor temperature exerted a consistent effect on the amount of insecticide removed. In many instances, however, about a fourth of the amount of DDT was removed, and the factors protecting the remainder against removal are not definitely known. Solutions of the two detergents used, Dreft and naphtha soaps, did not consistently remove greater quantities of DDT than did tap water alone, and the same was true of weak aqueous solutions of the or-

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ganic solvents used, acetone, ethyl acetate, ethyl alcohol and benzene, and of a one per cent aqueous solution of HC1.

Scientists at the Michigan experiment station have concluded that the best way to control DDT residues on apples is to limit the number of applications to the minimum amount necessary to control insect pests. Should this amount leave residues at harvest time in excess of the tolerance limit, future applications should be lessened and supplemented with other insecticides more susceptible to removal, in amounts sufficient to control the pests.

#### BLACK WALNUTS PROVE HARMFUL TO STOCK.

Studies of the cause of severe wilting of tomato plants growing adjacent to black walnut trees have convinced scientists at the New York state experiment station, at Geneva, that the trouble is directly related to a toxin given off by the roots of the black walnut.

Dr. Otto A. Reinking, station plant disease specialist, advises that in all cases observed during the past ten years, the effect on tomato plants growing in the root area of walnut trees was severe enough to cause almost a total loss of fruit in the affected spots.

"One should hesitate to plant certain nursery stock in fields which may border black walnut trees," Dr. Reinking says. "Such fields should be planted to crops known not to be affected, or the black walnut trees had better be cut down. Even where the trees are cut down, however, no stock should be planted in the field the same year, or until the roots have decayed so as to allow time for the toxins to be leached out of the soil."

The chemical which is believed to cause the injury, and which has been extracted from the hulls and roots of black walnuts, is known as juglone and has proved exceedingly toxic when injected into stems of tomato and alfalfa plants.

**BRENT'S NURSERY.** Jackson, Miss., is not the name of a new business established by H. D. Day, as previously stated in the American Nurseryman, but the name of the nursery where he had been employed as a commission salesman and landscape contractor before starting his own business this fall. Brent's Nursery was established by R. L. Brent in 1932, and he has never had any partner other than his wife.

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## COVER ILLUSTRATION.

### Jasminum Nudiflorum.

Jasminum nudiflorum, the winter or Chinese jasmine, is a shrubby vine grown extensively in the upper south and used in some quantity as far north as Washington, D. C. Little is seen of this plant of Chinese origin in the central states, since it is not fully hardy in this territory. A few plants have been seen doing well in the vicinity of Cincinnati, O., but it has not proved reliably hardy at Columbus, O.

The winter jasmine is a viny, rambling shrub with arching branches. In habit of growth it is not unlike the common Forsythia suspensa. The branches are uniformly green and angled, and the tips frequently take root where they touch the ground. The plant is densely branched, and because of its tip-rooting habit it frequently becomes a tangled mass.

The leaves are compound, being composed of three leaflets of about an inch in length. The leaves are dark green and attractive.

The outstanding characteristic of the winter jasmine is its solitary yellow flowers borne axillary along the full length of the past season's growth. The bright yellow flowers appear in the first warm days of spring and may continue well through April. The individual flowers are not unlike those of the forsythia.

Jasminum seems to be adapted to a relatively wide range of soils. The plant stands sun or slight shade, is free from injurious insects and diseases and is readily transplanted.

Where this plant is used in regions north of the upper south, it should be given a sunny exposure in a protected situation. In such locations it will be enjoyed for its early spring flowers. It may be used for trailing over walls or fences and on deep slopes and may be trained as a vine for covering trellises or pergolas. It will be used more or less as a novelty north of the upper south. L. C. C.

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